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ABSTRACT

This project identified the competencies required by the vocational education teacher/administrator to adequately provide occupational preparation to handicapped and disadvantaged students referred to collectively as "the non-successful student" within the mainstream of a vocational education program. Research methodology involved a literature review and a questionnaire survey of special education and vocational education teachers, administrators, and support personnel in New Hampshire. Of the 172 survey respondents, 76% indicated that they were not adequately prepared to teach the non-successful student. In addition, there were no specific programs in the state to develop the desired competencies. Utilizing the research findings, a course outline was developed to provide an overview of the special problems encountered in teaching the non-successful student. Recommendations are offered for course implementation and curriculum expansion. Appended are the literature sources cited, survey instrument, checklist of teacher competencies, participating schools, and bibliography. (RG)

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FINAL REPORT
of
CURRICULUM RESEARCH AND DESIGN FOR A VOCATIONAL SPECIAL SERVICES EDUCATION STAFF DEVELOPMENT PROGRAM IN NEW HAMPSHIRE

Keene State College Industrial Education
Keene, New Hampshire

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ABSTRACT AND FINAL REPORT OF

CURRICULUM RESEARCH AND DESIGN FOR A VOCATIONAL SPECIAL SERVICES EDUCATION STAFF DEVELOPMENT PROGRAM IN NEW HAMPSHIRE

A Keene State College Industrial Education Project
Funded by the Division of New Hampshire
State Department of Education Concord, New Hampshire

Robert E. Wenig, Project Director

Douglas C. McCarthy, Graduate Research Assistant

The main objective of this study was to determine what competencies are required by the vocational education teacher/administrator to adequately provide occupational preparation to non-successful students within the mainstream of a vocational education program. Once generated, these competencies could form the basis for improving vocational teacher/administrator preparation so that all students, including those who were not succeeding can better be served.

The main objective of the study was achieved through two forms of research study:

First, a review of the literature was conducted to determine which competencies specialists and industrial education professionals considered necessary for vocational teachers teaching non-successful students. This included visits to certain colleges and universities to talk with vocational educators working on similar studies.

Second, a survey instrument was developed and sent to a targeted population to determine the degree of competency of New Hampshire vocational education teachers/administrators; i.e., their knowledge about the non-successful student and the degree to which they were providing adequate vocational education to these students. In addition, the research was intended to determine what kinds of vocational teacher preparation are needed to provide teachers and administrators with the required competencies.

The total population of the second part of study was 400 special education and vocational teachers and administrators as well as special support personnel. One hundred seventy-two (43 percent) responded to the survey, indicating their degree of knowledge of non-successful students. Analysis of the returned data was accomplished by use of the University of New Hampshire Computer Center which provided straight frequency totals and percentages. In addition, cross tabulations were performed according to the respondents' position and area of expertise.

The results of the survey indicated that: (1) A significant number of vocational teachers and administrators are not adequately prepared to deal with the non-successful students found in the regular vocational programs. (2) Because of the emphasis on mainstreaming handicapped and disadvantaged students throughout the vocational programs in New Hampshire, there is a need to implement vocational education teacher preparation which will provide teachers-in-training and teachers in the field with the competencies necessary to better service the non-successful students. (3) The specific competencies listed in the study should be included in vocational teacher preparation if non-successful students are to be profitably included in the regular vocational education program.

The conclusion of the study provided a list of twenty-five competencies deemed important for vocational teachers/administrators to adequately serve the non-successful student found in the regular classroom situation. In addition, a list of specific characteristics of the non-successful students was developed to facilitate their identification and evaluation. The lists of characteristics and required teacher competencies were used as the basis for developing a course/curriculum outline that is needed to provide an overview of special problems encountered by teachers when teaching non-successful students.

ACKNOWLEDGMENTS

The writers wish to express their gratitude to Mr. John Bean and Dr. William Hulle through whose efforts and concerns for providing quality vocational education to all students this project was initiated. It is also very much appreciated the advice and encouragement from the Advisory Committee and Dr. Neal Andrew, Chief of the Division of Vocational Technical Education and his excellent staff. Perhaps, what was even more important to the study was the cooperativeness received from teachers, administrators, and specialists found at the twenty vocational centers and other vocational programs who completed the lengthy needs assessment questionnaire. The writers also wish to acknowledge the assistance in editing, typing, and duplicating of the several drafts which was provided by the staff of the Industrial Education Department at Keene State College. In essence, without the combined efforts of all interested parties this research could never have been completed.

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Keene State College Keene, New Hampshire

August, 1975

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CHAPTER I

INTRODUCTION

Background of the Project

In the Spring of 1974 discussions were begun at the administrative levels by Keene State College Industrial Education personnel and the New Hampshire State Department of Education, Division of Vocational Technical Education. The discussions centered on the lack of trained vocational teachers to deal competently with disadvantaged and handicapped secondary education students. It was recognized that, insofar as these students were concerned, teacher training in the state was lacking; that is, teachers needed to be trained to be successful with students other than the average or above average.

The mission of the Departments of Home Economics and Industrial Education at Keene State College is to provide New Hampshire with highly qualified vocational education teachers. On the basis of this commitment and the recognition of inadequate training for the teachers of disadvantaged and handicapped vocational students, an investigation was undertaken to determine how the college could fulfill its service obligation to vocational education in New Hampshire.

Keene State College plays the dual role of providing its own degree program and of serving as a member of the

University System of New Hampshire. The University System is committed to the state wide cooperation of its four-member campuses in order to provide increased educational opportunities to the people of New Hampshire. To achieve this aim, the University System of New Hampshire instituted the Masters of Occupational Education (M.O.E.) degree program in January of 1974. The degree is administered through the University of New Hampshire Graduate School. Early in the discussions, it was decided that the M.O.E. program could be an ideal vehicle in which to deliver the kind of training needed by vocational teachers.

In June of 1974 Dr. William Hulle, Coordinator of Vocational Education at Keene State, Dr. Robert E. Wenig, Chairman of the Industrial Education Department at Keene State, and Mr. John Bean, Consultant for Special Services, Division of Vocational-Technical Education, New Hampshire State Department of Education, met to discuss possible answers to two questions.

1. Is the present vocational education teacher preparation program in New Hampshire adequate to meet the needs of handicapped and disadvantaged students?
2. If not, what additional preparation would be necessary?

Messrs. Bean, Hulle, and Wenig wrote and had funded a

State of New Hampshire research proposal to answer these two questions.

In September of 1974 an Advisory Committee of persons in New Hampshire who had interest and expertise in the areas of vocational education and special education met to provide guidance and direction to the development efforts. The objective of these efforts was to identify the teacher and administrative competencies needed to effectively serve the handicapped and disadvantaged students normally found in the vocational programs.

Included in the membership of the Advisory Committee were:

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Mr. John Bean, Jr., Consultant
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The strategies and recommendations which followed these initial meetings were to:

1. Develop a list of competencies needed by vocational education teachers to teach the non-successful student.

2. Develop a course overview of the problems involved in teaching the non-successful student. The proposed course could be offered through the M.O.E. program.

3. Develop a description of curriculum content based on the needed competencies.

4. Perform a needs-assessment of the vocational teachers, administrators, and support personnel working within the twenty designated vocational centers in New Hampshire.

5. Review the literature describing competencies vocational teachers need in order to teach the non-successful student.

6. Research existing teacher-preparation programs offering special preparation to vocational education teachers in training.

7. Employ a graduate assistant with expertise in special education of the handicapped to carry out the above recommendations and activities.

In September of 1974 Mr. Douglas G. McCarthy, special education teacher at The Learning Center for Deaf Children, Framingham, Massachusetts, was hired to carry out the required research and present recommendations for curriculum development. Mr. McCarthy is a special education teacher who has worked with educable mentally retarded, emotionally disturbed, learning disabled, as well as with the culturally and socioeconomically disadvantaged students. Most recently, Mr. McCarthy has been employed as a teacher of the deaf.

Statement of the Problem

The expansion of vocational education programs for students with special needs was mandated by the Vocational Education Act of 1963 and its 1968 amendments. One of the objectives of the 1968 amendments was to provide meaningful vocational education to those handicapped persons who were not able to succeed in the regular vocational education program.[1]

The 1968 federal legislation specifically identified and classified the areas of handicaps and the disadvantaged to be served. In accordance with the classification, the 1968 amendments required that not less than ten percent of the basic state grants be set aside for the physically, mentally, and emotionally handicapped and at least fifteen percent must be allotted for the academically and socio-

economically disadvantaged.[2]

In recent years there have also been increased attempts to meet the special needs of handicapped and disadvantaged students within the regular public school programs. The essential underlying philosophy here is that each student be allowed the opportunity to participate--according to his ability--in the regular education program. This development in special education services has been termed "mainstream education" of students with special needs. In the mainstream concept, the students and teachers are provided with the necessary backup and supportive remedial services needed to compete successfully in the regular program.

Furthermore, recent New Hampshire legislation has required more expansion of vocational programs with increased services for the handicapped and/or disadvantaged student.[3] Special education teachers are attempting to place an increasing number of these same non-succeeding, handicapped and disadvantaged students into regular vocational programs. As a result, the handicapped and disadvantaged students will have increased opportunities of achieving occupational success.

However, even with the expansion of vocational education there is an inadequate supply of vocational teachers serving handicapped and disadvantaged students.[4]

At present, New Hampshire has no program specifically designed to train secondary vocational teachers or administrators to serve the handicapped and disadvantaged student found in the regular vocational classroom situation. In addition, the vocational teacher is not sufficiently knowledgeable about the special needs of the handicapped or disadvantaged student. By the same token, the special education teacher also lacks expertise in teaching required vocational skills.[5]

Problem Statement

The major problem this study resolved was what teacher and administrator competencies are needed to better serve the handicapped and disadvantaged students (referred to collectively as "the non-successful student") within the secondary vocational education programs of New Hampshire.

Objectives

The objectives of this study were to:

1. Perform research for the purpose of
    a. Determining the current status of occupational teacher education programs to instruct non-successful students.
    b. Identifying and describing types and behavioral characteristics of non-successful students.
    c. Determining teacher competencies required by New Hampshire vocational education teachers/administrators to teach non-successful students in the mainstream of vocational education programs.

2. Prepare a curriculum outline at the master's degree level to specialize in the teaching and/or administrating of vocational education for these students.
3. Prepare a course outline for an overview of the special problems in teaching non-successful students.

Significance of the Study

Federal legislation has mandated that local education officials provide meaningful vocational education to all students including handicapped and disadvantaged.[6] The New Hampshire Advisory Council for Vocational-Technical Education in 1973 and 1974 recommended to reinforce this effort.[7] In New Hampshire, the stated goal of the Special Education Section of the Vocational Rehabilitation Division of the State Department of Education is, "that placement of special education students in a regular public school class is preferable to placement in any other type of program of education and training contingent upon an ongoing process of evaluation."[8] Also, the standards outlined by the New Hampshire Special Education Section state that "the school district has the responsibility for the development and administration of a special course of study, including prevocational training and guidance, leading to the development of the competencies required for productive

citizenship."[9] This emphasis on mainstreaming of handicapped and disadvantaged students to achieve productive citizenship makes it clear that there is a rapidly growing need for additional competencies by administrators and vocational teachers.

These additional competencies must first be identified, then organized to be included in the required training of vocational teachers. When implemented, such instruction would meet the long range need of supplying New Hampshire and surrounding areas with qualified teachers and administrators to deal successfully with special needs students. Hopefully, these efforts will result in the provision of meaningful vocational education training for those students who are not now successfully participating in vocational programs in regular classroom situations.

Basic Assumptions

The study was conducted under the following assumptions:

1. There will be an increased demand for vocational programs to provide occupational preparation to handicapped and disadvantaged students.
2. There is a lack of vocational teachers and administrators with adequate training to teach and administer programs for handicapped and disadvantaged students.
3. These vocational teachers and administrators, when provided with adequate training, will be able to serve a greater number of handicapped and disadvantaged students.

4. There are college and university teacher-training programs that can be used as a model for preparing vocational teachers and administrators to serve the non-successful (handicapped and disadvantaged) student.

5. There is adequate information available to achieve the objectives of the study.

6. There is a commitment by educators on all levels to provide better occupational programs for the handicapped and disadvantaged.

Limitations of the Study

The study was concerned with those students who, for whatever reasons, are not succeeding in the regular vocational education program. These students not meeting success are defined as:

1. Students who do not exhibit an identifiable handicap which inhibits their success.

2. Students who do possess an identified handicap which requires special services to attain success.

3. Students who presently are, or in the future could be, found in the regular vocational program. These might include those students with identified handicaps not requiring a special self-contained program.

Therefore, the term "non-successful student" will be used throughout this report to refer to those students not meeting success in the regular vocational program. The non-successful student may or may not be identified or diagnosed as handicapped or disadvantaged.

It was the intent of this study to develop and present in final form, a competency-based curriculum outline

for the preparation of teachers/administrators at the master's degree level to better serve the handicapped and disadvantaged students. The study also required the development of a course outline for an overview of the problems encountered in teaching the non-successful student regardless of what the educational organizational situation may be.

It was not, however, within the scope of this study to focus on the needs and organization of secondary occupational programs. The discussion of necessary program modification and special services involved in the mainstream education of handicapped and disadvantaged students would necessitate further study equally as broad in scope as this one.

Definition of Terms

Competency-based Education

Competency-based education is an approach which makes public in advance learning objectives in measurable terms. It is a criterion referenced approach which holds the learner accountable to achieve stated objectives with specified standards known both to the learner and the teacher.

Competency-based teacher education is based on competency objectives insofar as the knowledge, behaviors, and skills can be identified. The criteria for performance are derived from these objectives.[10]

Disadvantaged

Disadvantaged refers to those students who have academic, cultural, socioeconomic, and/or other handicaps that prevent them from succeeding in regular vocational education programs. As a result, they require--for whatever reason--specially designed educational services. Such a

handicap may be the result of neglect, delinquency, poverty, and/or cultural or linguistic isolation from the community.

Handicapped

Handicapped student refers to individuals who are mentally retarded, hard of hearing, deaf, speech-impaired, visually handicapped, seriously emotionally handicapped, crippled, or having other health impairments which could hinder their success in regular vocational education programs. For these students to be successful requires special educational assistance or a modified vocational education program.[11] The guidelines for implementing the 1968 Amendments to the Vocational Education Act include in the handicapped category, (1) mentally retarded, (2) orthopedically handicapped, (3) visually impaired, (4) hearing impaired, and (5) learning disabled.

1. Hearing Handicapped:

   A. Hard of Hearing:
   Persons with a hearing loss severe enough to seriously interfere without amplification or communication training in the development of receptive/expressive language skills. With amplification and communication training such persons can hear and understand speech, but with difficulty.

   B. Deaf:
   Persons with a hearing loss severe enough to seriously interfere, even with amplification and communication training, in the development of receptive or expressive language skills. With amplification of sound provided with a hearing aid, the individual is unable to hear and recognize all speech sounds.

2. Learning Disability:
   Persons who exhibit a disorder in one or more basic psychological processes involved in understanding or using spoken or written language. Among others these processes may be manifested in one or more of the following: listening, thinking, talking, reading, writing, spelling, or computing.

3. Mentally Handicapped:
Mentally handicapped means persons whose rate of intellectual development is significantly less than the normal rate. Their potential for academic achievement is estimated to be markedly less than that expected of persons with a normal rate of intellectual development.

   A. Educable Mentally Retarded:
   Individuals who have a rate of intellectual development which is approximately 45 to 75 percent of normal. They can be expected to achieve maximally at the sixth grade level academically.

4. Orthopedically Handicapped (Crippled):
These individuals have a limited ability in self-mobility, sitting in the classrooms, and/or using materials or equipment for learning because of muscular, skeleton, or neuromuscular impairment.

5. Visually Handicapped:

   A. Partially Sighted:
   Persons who retain limited but useful vision for acquiring an education, but whose visual impairment after needed treatment and/or correction reduces school progress to such an extent that special educational provisions are necessary.

   B. Blind:
   Persons whose visual disability is so severe (legally blind), that the vision loss indicates they can and should function in their total educational program chiefly through the Braille system, audio-aids, and special equipment necessary for them to pursue their education effectively without the use of residual vision.

Home Economics

Home economics and related occupations are studies concerning the activities and areas related to human and family welfare. Areas of study include human growth and development relations, home management, consumer sciences, foods and nutrition, clothing, and the near environment.

Industrial Arts

Industrial Arts education is a study of industry, its products, its workers and its problems. Its objectives--which include explorations, understanding, and appreciations related to industry--are a part of general education and consist of construction activities which grow out of the classroom situation.

Mainstream Education

The mainstream education concept advocates placing as many students as possible who have been insulated from society by the self-contained classroom into the regular vocational programs. The practice of "mainstreaming" recognizes that "the individual may have specific learning or behavioral problems which can and should be dealt with only part of the time in an isolated class, and the rest of the time should be spent in a 'normal' classroom situation."[12]

Non-Successful Student

The term, non-successful student refers to those individuals who are experiencing failure in regular vocational education programs.

Vocational Education

Vocational-technical education provides students with specific job-entry skills and/or retraining skills. Vocational education programs are offered during the eleventh and twelfth grades in secondary school and at post-secondary vocational programs below the four-year baccalaureate degree.

Vocational Program

When reference is made to vocational programs within this study, that term will encompass offerings at the secondary level of instruction which provide varying degrees of knowledge and skills relative to understanding and employment in the industrial-technical world of work.

Methods of Investigation

The initial steps taken to fulfill the objectives of this State of New Hampshire grant involved efforts to solicit a broad base of information input from interested persons

throughout the state. For this purpose, meetings were held with the State of New Hampshire Director of Professional Development, Division of Vocational-Technical Education; personnel of the innovative post-secondary program for the hearing impaired conducted at the Vocational-Technical College at Claremont; and special education personnel at Keene State College. Various local vocational directors in the state were also involved.

Following the meetings with interested people in New Hampshire, five general procedures were established. They were:

1. To establish the need for additional preparation of New Hampshire vocational teachers/administrators to deal successfully with the non-successful student.

2. To research other colleges and universities in the country to determine how they prepare vocational teachers/administrators for working with non-successful students.

3. To identify, select, and validate the needed teacher and administrator competencies.

4. To develop a competency-based curriculum outline to prepare vocational teachers and administrators to better serve handicapped and disadvantaged students.

5. To identify and describe the characteristics of the handicapped and disadvantaged students.

Many of the activities carried out were overlapping. While there was a natural progression of efforts, some activities did occur simultaneously.

The first step in the research phase of the study was an extensive review of the literature as well as documents available through the ERIC retrieval system.

Personal interviews were conducted with state-level department of education personnel from New Hampshire, Vermont, and Massachusetts. On-site visits were conducted with Dr. Russell Kruppa at Trenton State College, New Jersey, and Dr. Thomas Tsuji, Glassboro State College, New Jersey. Visitations also included innovative secondary programs offering vocational education to handicapped and disadvantaged students. The interviews and on-site visits were an effort to:

1. Determine state policies and procedures planned for providing vocational education to non-successful students.
2. Determine what specific college and universities programs are offering vocational teacher-preparation in this area.
3. Identify the secondary schools which provide vocational education to handicapped and disadvantaged students in order to identify competencies needed by vocational teachers.

After learning how other states were meeting this need, the next step was to perform a needs assessment of vocational teachers, administrators, and support personnel in New Hampshire. Emphasis was then placed on what vocational teachers, administrators, and special education teachers in New Hampshire thought was important and necessary in preparing vocational teachers for their expanded role.

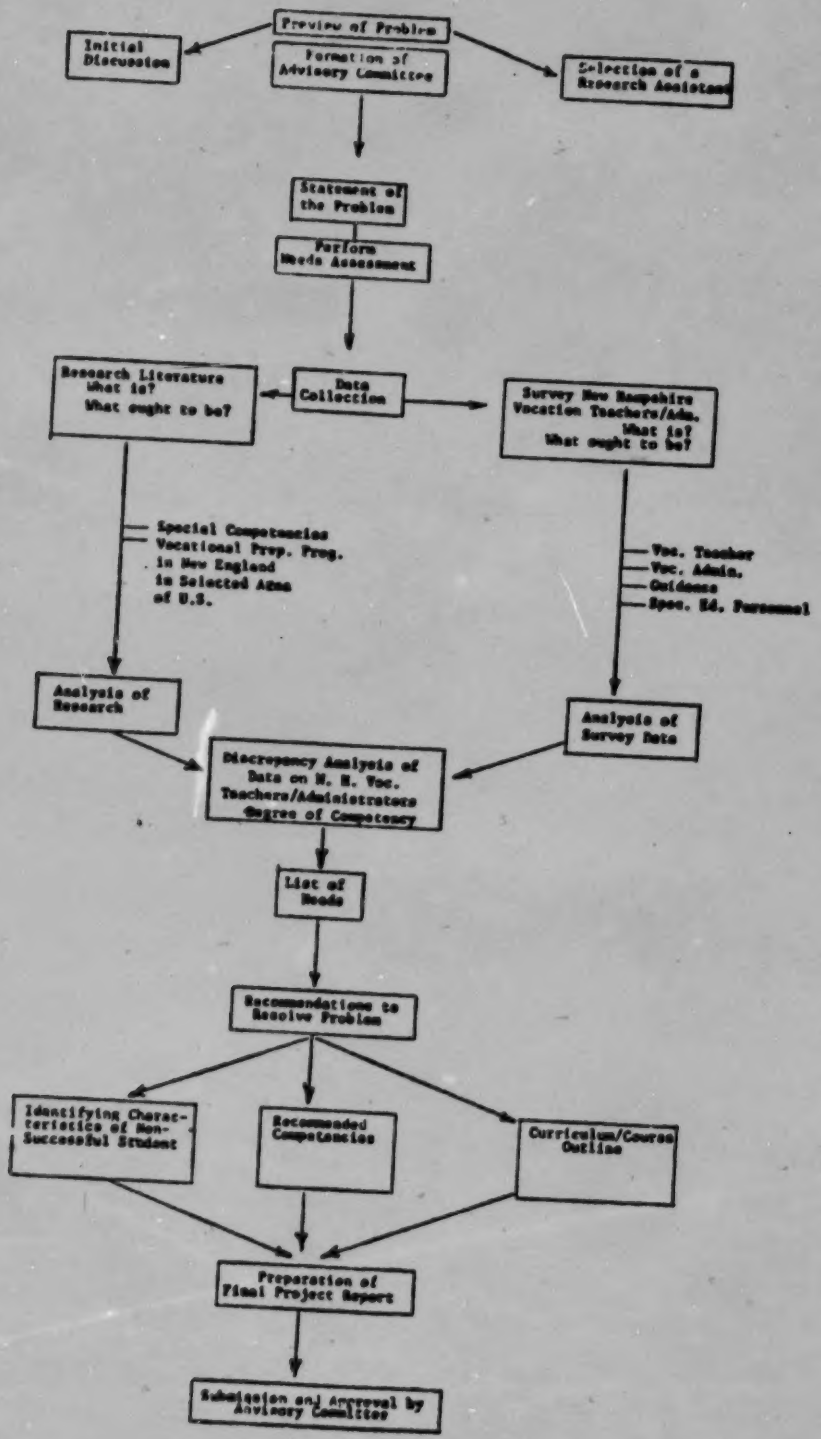
Information was gathered by means of a questionnaire survey (see Appendix A) of vocational administrators/teachers and special education teachers throughout the designated twenty vocational centers in New Hampshire. The objectives of the survey were:

1. To determine the present status of vocational teacher knowledge concerning non-successful students.
2. To determine the need for special preparation for vocational teachers/administrators in New Hampshire.
3. To determine what teachers themselves feel is important to know in preparing to teach non-successful students.

The results of responses to such a questionnaire were analyzed to determine the general degree of knowledge of New Hampshire vocational teachers/administrators concerning handicapped and disadvantaged students. The analysis also determined the areas of competency needed by teachers. This information was correlated with other competency-based teacher preparation programs. Based on the compiled list of required competencies, a curriculum outline for preparing vocational teachers and administrators in this area was presented. This final report also includes a list of student characteristics describing a recommended course outline for disadvantaged and handicapped students which will be helpful to vocational educators in preparing teachers to serve these individuals. Figure 1 illustrates the activities performed

FIGURE 1

CHART SHOWING THE ACTIVITIES PROPOSED
TO FULFILL THE OBJECTIVES
OF THE RESEARCH PROJECT



to fulfill the stated objectives of the study.

Summary

Until recently, the preparation of secondary vocational teachers/administrators trained to adequately serve the handicapped and disadvantaged students was very limited. At present, no vocational teacher preparation program in New Hampshire specifically offers a researched and fully developed program or course to prepare prospective teachers/administrators to teach handicapped and disadvantaged students.

The purpose of this study was to identify those competencies needed by teachers and administrators to provide vocational education to students not presently meeting success. The objective was also to use these competencies as a basis for developing a vocational teacher preparation program in New Hampshire.

CHAPTER II

REVIEW OF THE LITERATURE

The problem of this study was to determine which teacher and administrator competencies are needed for better serving the handicapped and disadvantaged students within the regular secondary vocational education programs of New Hamsphire. The impetus for this action came from the 1963 Federal Vocational Education Act which mandated that vocational education will better serve the handicapped and disadvantaged persons who previously were not receiving training for employment. In 1968, an amendment to this act added new dimensions for serving the disadvantaged and handicapped.

The State Plan of New Hampshire for Vocational Technical Education commits the state to the concept that vocational education be made available to all secondary students.[1] Along with this went a concern for developing programs for students not succeeding in the regular vocational education offerings. An integral part of the problem is simply stated: Who is properly trained to teach and administer vocational education to non-successful (disadvantaged and handicapped) students?

Before this question can be answered, another question must be asked: What teacher/administrator

competencies are needed to effectively serve non-successful students in regular vocational programs? Armed with a verified set of teacher/administrator competencies, one can make informed decisions relative to who is adequately trained and what program should be developed to prepare professional staff to effectively serve these students. The tasks of identifying these competencies starts with the initiation of a comprehensive review of pertinent literature.

Ancillary to determining necessary competencies is a description of the psychological and/or behavioral characteristics of disadvantaged and handicapped students. The objective of this chapter, therefore, is to examine the following questions in an attempt to (1) provide data for generating a list of vocational teacher and administrator competencies and (2) identify student characteristics for use in developing a teacher preparation program which will better serve handicapped and disadvantaged students. These questions are:

1. Primarily, who should be prepared with the special competencies needed to provide vocational education to the non-successful student?
2. What competencies are needed by the vocational or special education teacher and administrator?
3. With what characteristics of the non-successful student, both psychological and behavioral, must teachers and administrators be concerned?

Who should be Prepared with Special Competencies?

Is it realistic to expect the same person to have the necessary competencies for both a successful vocational and special education teaching experience? Should qualified vocational teachers develop special additional competencies in identifying and teaching students with handicaps? Should the special education teacher develop additional competencies in vocational skills? Another alternative is whether or not professional staff should develop a wide range of special competencies aimed at providing the vocational program to non-successful students.

Noting the trend toward placing special needs students in the regular classroom, Jones, in About Face In Special Education, suggests that all teachers be given more training in special education to gain better understanding of these students.[2] Freels, in Teaching Industrial Arts to Educable Mentally Handicapped, also recommends that undergraduate training in special education be required for industrial arts teachers.[3] Brennan, in The Slow Learner in Industrial Arts, suggests that industrial education teachers prepare for the inclusion of slow learners in their laboratories.[4] In 1972, Brolin and Thomas reported that special education teachers felt they needed preparation in vocational skills to successfully conduct their program. They felt special preparation was needed because the

occupational experience and instructional needs of mentally retarded secondary students are of necessity being provided by the special education teacher.[5] However, Bartsch maintained that this occupational preparation provided to handicapped students was inadequate, probably due to lack of training.[6] Kruppa encountered the same lack of adequate programs to prepare and upgrade vocational teachers to work with special needs students.[7]

Another concern of special education teachers surveyed by Brolin was that the competencies needed to offer this occupational experience and instruction should not be obtained from persons other than the traditional teacher of the educable mentally retarded.[8] Groves stated that "most vocational teachers have little, if any, special training which qualify them in working with other than average students.[9] Therefore, as recent as 1972, the task had to be performed by the special education teacher.[10] However, Bartsch maintained that the industrial education taught by special education teachers is not sufficient to meet the dual purpose of vocational education; that is, employability and, no less important, self-fulfillment and independence.[11] The answer to the basic question of who will meet the needs of the handicapped and disadvantaged student rests in the cooperative efforts of vocational and special education.

Alternative solutions to this problem have been

attempted through different approaches in teacher preparation programs. Four approaches to teacher preparation are:

1. Pre-service undergraduate teacher preparation program. Dr. J. Russell Kruppa of Trenton State College, Trenton, New Jersey is attempting to remedy the long-range problem of providing a source of vocational teachers with expertise for success with all types of students. He is proposing a four-year degree program offering dual-certification in Industrial Arts and Special Education. An extensive research of teacher preparation programs was conducted to determine the competencies needed by vocational education teachers. The result was a Model for Preparing Teachers of Industrial Education for Disadvantaged and Handicapped Children at the Secondary Level. Using the working model, courses were evaluated and modified to provide the necessary competencies to prospective Industrial Arts teachers. Following Trenton State's college senate approval for course and curriculum modification, the program is expected to be offered in the fall of 1975.[12]

2. In-service staff development program. Dr. Thomas Tsuji and Dr. Stanley Urban of Glassboro State College, Glassboro, New Jersey, have been attempting to meet the problems currently facing vocational teachers encountering the non-successful students. Through a series of meetings with school district personnel, needs were identified and a district-wide advisory committee was formed. An in-service program of workshops was organized to meet the pressing needs conveyed by teachers and staff. From these ongoing workshops was developed the formal course work of special preparation presently offered at Glassboro State College.[13]

3. Professional Development Program by Hull and Halloran. The objectives of such a program are a broad-based training concept wherein the various strata of personnel apt to come in contact with the handicapped or disadvantaged student are identified. Workshops and courses of study are designed to sensitize the whole spectrum of professionals functioning within the secondary school to the needs and characteristics of the disadvantaged and handicapped

students. Such a program may offer undergraduate and graduate level courses on in-depth training in the competency areas essential for instructing handicapped and disadvantaged students. Courses may also assist personnel in providing supportive services to non-successful students or assist teachers in teaching the non-successful student within the regular vocational program, or in special vocational programs.[14]

4. Pre-service graduate teacher/administrator preparation program. Through continuing education for an advanced degree, courses are offered within a graduate program providing vocational teachers with knowledge and competency to deal with the non-successful student.

What Teacher/Administrator Competencies are Necessary?

Whichever vocational teacher preparation program is developed, an offering must be based on a common set of competencies. Identification of such competencies has been carried out through a variety of sources and has been developed for specialization areas, such as the culturally disadvantaged, the educable mentally retarded, and the emotionally disturbed.[15]

The Experimental and Demonstration Projects of the mid-1960's focused on developing ways to teach the disadvantaged.[16] The impact of the projects was less than optimal. They faced problems which still may be present. Among the barriers faced were: (1) lack of cooperation with the local school agencies; (2) lack of knowledge, values, and motives of the target population; and (3) lack of special-purpose education and training methods. Just as the project

personnel were discovering that the curricula, tools, methods, and attitudes were lacking, studies in the field corroborated their feelings of a need to upgrade services to the handicapped.[17]

For vocational teachers to successfully teach special education students, Kemp proposed the following competencies:

1. Subject matter competence.
2. Interest in working with these students.
3. Ability to reinforce slow learners and respond to all students.
4. Ability to seek out new techniques for communicating with students.
5. Skill in presenting goals to students and helping them to meet their needs.
6. Specialized training to work with the disadvantaged.
7. Ability to work with school personnel.
8. Ability to gear instruction to the understanding of students.
9. Skill in helping students build better self-concepts.[18]

In 1973, after an extensive survey to classify and categorize various teacher competencies, Kruppa listed eleven competency areas for the prospective teacher of the exceptional child. The prospective teacher will:

1. Understand the types of natures of exceptionalities among children and youth and their educational relevance.

2. Possess competency in individual and group classroom management procedures appropriate to exceptional children.

3. Demonstrate use of diagnostic procedures to identify the learning difficulties of the exceptional child.

4. Have the ability to develop and implement prescriptive programs based on diagnostic findings.

5. Possess knowledge of techniques utilized in behavioral control.

6. Possess social skills and attitudes to work effectively with other school personnel in coordinated programs for exceptional children.

7. Have the ability to interpret the educational program to parents, teachers, administrators, and community groups.

8. Have ample opportunities to observe institutions and facilities concerned with the education, health, and welfare of all types of exceptional children.

9. Have supervised laboratory experiences with exceptional children as one means of determining the candidate's maturity for work with exceptional children.

10. Be encouraged to affiliate with appropriate professional groups and create an awareness of the referral agencies available for aid to exceptional children.

11. Develop competence in planning and conducting wide varieties of learning experiences for individuals and groups.[19]

From Mackie's list of competencies, four major areas apply to the secondary teacher. Although they refer specifically to mentally retarded students, they can be generalized to other specialized areas. They are:

1. Understanding the characteristics of the mentally retarded child and his place in society.

2. Developing a functional curriculum based on broad personal and social needs of the mentally retarded.

3. Understanding and applying appropriate procedures based on an understanding of the known learning characteristics of the mentally retarded.

4. Selecting, developing, and using appropriate instructional materials and equipment in teaching mentally retarded children.[20]

In an attempt to fill the gap in the research to determine the needs of secondary educable mentally retarded students and the teacher competencies necessary to meet those needs, Brolin and Thomas presented a list of 31 competencies. This list was used to survey special education teachers to determine the degree of their importance. They are ranked below:

Very Important Competencies
- Work adjustment
- Job seeking
- Personal care
- Socially acceptable behavior
- Job tryouts
- Vocational evaluation

Important Competencies
- Reinforcement for self-confidence
- Vocational guidance
- Responsible to self, others
- Communication skills
- Home management
- Academic instruction
- Community agencies
- Report to agencies
- Interaction with normals
- Professional assistance for responsibilities
- Develop manual abilities

Leisure time
Home mechanics
Civic responsibilities
Mobility training
Curriculum models
Specific job training
Social, emotional, intellectual functioning
Utilizing community resources
Helping parents
Independent thinking
Evaluation of academic abilities

Moderately Important Competencies
Aesthetic values

The same competencies are listed according to degree of importance according to curriculum areas. They are:

Occupational Information and Preparation
Vocational evaluation
Work adjustment
Developing manual abilities
Specific job training
Vocational guidance
Job seeking
Community agencies
Job tryouts
Job placement
Report to agencies
Post-school activities

Activities of Daily Living
Home management
Home mechanics
Personal care
Utilizing community resources
Leisure time
Mobility training
Civic responsibilities
Communication skills
Responsibilities of self, others

Psycho-Social
Socially acceptable behavior
Reinforcement for self-confidence
Interaction with normals
Independent thinking
Aesthetic values

Social, emotional, intellectual functioning
Helping parents
Professional assistance for responsibilities

Academic

Evaluation of academic abilities
Academic instruction
Curriculum models[21]

According to Groves in A National Survey of Vocational Education Programs for Students with Special Needs that was conducted in 1966, the desirable characteristics of vocational programs for students with special needs were rated as follows:

DESIRABLE CHARACTERISTICS OF VOCATIONAL TEACHERS FOR STUDENTS WITH SPECIAL NEEDS (N=79)[22]

Characteristics of Programs	Number of Programs	Percent
Teachers need special personal qualifications to work with these students	78	99
Teachers have had occupational experience related to program	66	84
Teacher employed beyond regular school term	59	75
Teachers have had special education or training programs	56	71
Teachers devote 100% of time	44	56
Teacher involves resource people in instruction	43	54
More than one teacher involved	32	41
Teachers have assistants or special teachers to assist	22	28

The following illustrates how the participants of Groves' survey rated the personal qualifications needed by teachers of vocational programs for students with special needs.

TYPES OF PERSONAL QUALIFICATIONS BELIEVED NEEDED BY TEACHERS OF VOCATIONAL PROGRAMS FOR STUDENTS WITH SPECIAL NEEDS[23]

Personal Qualifications Reported Needed by Teachers	Number of Programs	Percent
Patience, common sense, sense of humor, and understanding	24	30.0
Understanding of students	20	25.0
Patience	17	22.0
Knowledge of job skills	9	11.0
Work experience by teacher	5	6.0
Common sense and sense of humor	2	3.0
Public relations ability	1	1.5
No response	1	1.5
Total	79	100.0

The respondents to Groves' survey also maintained that teachers of special needs students require somewhat different qualities than teachers working with average or above average students. The majority of respondents believed that the selection of such teachers should be based upon individual personal qualities of the teacher rather than

upon academic excellence alone.[24]

Furthermore, Hull and Halloran stated that, while there is no infallible formula for preparing teachers to successfully incorporate handicapped students into their classrooms, there are certain teaching practices which would facilitate this goal. They maintain that teachers should:

1. Develop a sensitivity to the learning styles of EMR's.
2. State performance objectives and carefully construct task ladders of enabling objectives.
3. Precede instruction with pre-test assessments to determine appropriateness of material to be presented.
4. Present concepts to be learned in a clear, direct, and uncomplicated manner.
5. Encourage continuous involvement of special students through repeated questioning and positive, corrective feedback.
6. Review concepts presented and provide for appropriate practice of all skills learned.[25]

In developing the Professional Development Program for Vocational Educators of Handicapped Student, Hull and Halloran compiled a checklist of teacher competencies. This checklist is found in Appendix B. The lists of teacher competencies acquired from the various sources were extensive and often overlapping. However, the competencies can be evaluated and classified into four categories dealing with (1) knowledge of the learner, (2) program development,

(3) instructional methods and materials and (4) resources available. A list of twenty-five competencies gleaned from the literature which encompass these four categories include:

Identified Competencies concerning:

1. The physical characteristics of handicapped students including such handicaps as: educable mentally retarded, hearing impaired, visually impaired, physically handicapped, emotionally disturbed, and disadvantaged.
2. Special problems concerning handicapped and disadvantaged.
3. Employment possibilities for handicapped.
4. Effective methods of communication with handicapped.
5. Methods of communication with deaf.
6. Approaches to teaching the handicapped.
7. Personal, social, academic competencies of the handicapped.
8. Psychological barriers to the handicapped.
9. Cultural and sociological influences on the handicapped.
10. Methods and techniques of counseling the handicapped.
11. Individualized instruction.
12. Entry and exit level skills in developing career ladders.
13. Instructional sequencing of occupational skills based on job (occupation) task analysis.
14. Mainstream education for handicapped students.
15. Factors contributing for low academic achievement.
16. How to teach non-readers.
17. Methods and techniques of motivating handicapped students.
18. Classroom management procedures for handicapped students.
19. Establishing appropriate learning situations for the handicapped.
20. Use of audio-visual aids in teaching the handicapped.
21. Preparing audio-visual media to aid in teaching the handicapped.
22. State regulations, procedures, and funds available for the education of the handicapped.

23. Locating and utilizing research and supplementary materials for the handicapped.
24. Special support services and reassurance personnel within your district.
25. Resources available to the teacher.

With what Characteristics of Disadvantaged and Handicapped Students should Teachers/ Administrators be Concerned?

One of the major reasons Glaser and Wickland gave for the lack of success in providing vocational education to disadvantaged and handicapped persons was insufficient knowledge about the population to be served.[26] Therefore, Groves delineated several classifications of persons not succeeding in vocational programs.[27] However, following the 1968 Vocational Education Amendments there was need for further research to update our understanding of the characteristics and needs of handicapped and disadvantaged students.

Academically Disadvantaged

This learner appears easy to define on the one hand but extremely difficult to program for on the other. One reason for not reaching more disadvantaged students, according to Kemp, is the problem of identifying those students considered disadvantaged as defined by the 1968 Amendments.[28]

The disadvantaged student's lack of success is not due primarily to any mental or physical disability but to not readily definable factors like family status, parent

neglect, personal problems, racial, and/or minority group relationships.[29]

Ressler, in 1971, cites several behavioral characteristics of disadvantaged youth which must be considered. They are:

1. Poor reading ability
2. Grade retardation
3. Introversion or withdrawal
4. Hostility
5. Proneness to delinquency
6. Social retardation
7. Physical deprivation
8. The primary style of learning being by physical and visual means rather than aural or listening.[30]

According to Seiler, some of the difficulties of disadvantaged students in relation to vocational training programs are:

1. The lack of the basic educational skills required by the established skill-training curriculum.
2. The association of the school-training environment with past failure.
3. The rigidly scheduled courses.
4. The teachers' attitude and lack of knowledge of the multiple needs of the disadvantaged.
5. The inability to adapt training methods to meet the needs of the disadvantaged.

6. The availability of training for highly skilled jobs for which they lacked basic educational skills. However, the need is to provide training in less skilled jobs and then advancing.[31]

In the impact of experimental and development projects, Seiler discovered that the three major problem areas in the education of the disadvantaged were:

1. Basic education skills (reading and math skills for passing tests).
2. Communication skills.
3. Work adjustment skills (attitudes, motivation, and behavioral attributes were limiting factors of success).[32]

Intellectually Handicapped

The mentally handicapped are classified according to multiple criteria; such as measured intelligence, adaptive behavior, and physical maturation. Defining and classifying retarded persons according to I.Q. ranges varies slightly depending on the author or upon particular state legislation. According to I.Q. ranges, the slow learner would fall between 80 and 95; the educable mentally retarded between 50-70; and the trainable mentally retarded between 30 and 50. Buffer, after exploring the various classifications of mental retardation based on I.Q., suggested that the borderline for mental retardation be changed to one standard deviation below its mean I.Q. of approximately 85. Thus the educable mentally retarded student can be considered to be one whose I.Q. is between 50 and 85.

This student comprises the majority of mentally retarded students enrolled in the public school.[33]

These students, however, must not be classified only on the basis of measured intelligence but also on their adaptive behavior and physical maturation. They are also described as persons who neither learn information nor develop attitudes or psychomotor skills at the same rate as normal learners. The following functional characteristics are due to decreased adaptive behaviors and motivation. In addition to a low I.Q., the mentally handicapped person has:

1. Low reading ability.
2. Low math skills.
3. Slow motor development.
4. Lack of an acute awareness of environmental conditions.
5. Restrictive psychological sets (habits).
6. Difficulty processing a sequence of visual stimuli.
7. Short attention span.
8. Poor interpersonal skills.
9. Impaired achievement at the sensory input level.
10. Retarded interest and motivation in school and learning.[34]

Item number ten does not preclude interest and motivation. For the retarded student, it is at an earlier, less developed level.

It has already been stated by Brolin which educational areas are of importance to educable mentally retarded students.[35] Also according to Sexton, the vocational teacher must know about any handicapping condition.[36] However, according to Hull and Halloran, for any program to truly serve the mentally retarded there should be a minimum effort placed on acquiring information concerning the characteristics of the retarded. Maximum effort must be reserved for developing and learning effective teaching methods.[37] These methods should be applied to exceptional experiences and instruction very important to the mentally retarded such as work adjustment, job seeking, job tryout, job placement, and vocational evaluation.

Brolin stated that industrial arts can be beneficial to the retarded student because it can provide him or her with an understanding of industry, exploratory experiences of diverse activities, and therapeutic exercises which should be the program priority.[38]

Laugh maintained that when an industrial arts program is fully developed for the retardate, it directly reinforces the education and various other aspects of the individual's total program.[39] It is, according to Sharkey and Porter, a learning experience in which the basic goals of self-realization, human relationships, economic efficiency, and civic responsibility are met.[40]

Physically Handicapped

The physically handicapped student is one who has a permanent physical disability which is the limiting factor in the educational process. Such a limitation does not [illegible] mental functioning capacity. As outlined in the 1968 legislation, the physically handicapped student may be orthopedically handicapped, visually impaired, or hearing impaired.[41] He or she may attend public classes in a wheelchair, on crutches, or some other modified means of mobility. The handicapped person may not be able to see or to hear the instructor. The orthopedically, visually, or hearing handicapped student can attend regular public school programs. Some will go on to college. Others will go directly to a job following high school according to the 1970 Texas Education Agency Survey.[42]

However, in order for physically handicapped persons to achieve their potential, modification must be made by the school, the teachers, and the staff. This modification will require:

1. Adapting machinery and equipment to fit the stature of those in wheelchairs or crutches.
2. Developing and constructing of aids to assist a handicapped person in the use of particular tools.
3. Using seeing eye dogs to master shop orientation by the visually impaired as recommended by federal legislation.[43]

Visually Impaired

There are several definitions of blindness which refer specifically to how well an individual can see with the best corrective lenses. Severe visual impairment may be termed "blindness," "functional blindness," the ability to read newsprint, or "legal blindness." "Legally blind," a term used to determine eligibility for public assistance, refers to persons who have ten percent or less of normal vision, or peripheral vision of 20 percent or less. According to Hulsey, such persons see at twenty feet what normally sighted persons see at 200 feet, and they are unable to read books printed in normal size type.[44] The person having a serious loss of eyesight, or even total blindness, must adjust and overcome the frustrations in meeting the obstacles in performing daily activities of a personal, vocational, social, or recreational nature.

Bruce listed several considerations for providing vocational training programs to the blind. They include:

1. Greater individual and personal instruction.
2. Extremely low teacher-student ratio.
3. Each student should have his or her own set of tools to feel while the teacher is instructing.
4. Laboratory orientation should be lengthened.
5. Measuring will be difficult, even with braille rulers.

6. Grading is much more difficult for the teacher.

7. Activities such as hammering, sanding, and drilling are not as difficult a challenge to a blind person as are the finishing processes.[45]

Hearing Impaired

Like visual losses, hearing impairments have a wide range from "hard of hearing" to "profoundly deaf." The term "hard of hearing" includes persons whose hearing is functional by means of amplification. The "deaf" person is one whose auditory deficits are extensive and/or severe enough to prevent the reception of oral language at normal levels of intensity in spite of medical treatment, surgery and/or the use of hearing aids and who are thereby handicapped in the development and/or maintenance of adequate language skills.[46] Such persons may be (1) congenitally deaf--born deaf, (2) pre-lingually deafened--lost their hearing prior to the acquisition of language or (3) deafened at some point after acquiring language. Needless to say, the problem of deafness is greatly compounded by the time of occurrence. The handicap of deafness is not the lack of sound, but the lack of language.[47]

It is difficult to view deafness as purely a physical handicap depriving a person of sound. Lawrence maintains that the problem of all deaf people in acquiring language--and particularly those who are prelingually deafened--is manifested for many in maturational retardation.[48]

Much of life is communicated through sound. It is through sound, words, and oral communications that we interact and adjust to our environment. To begin to understand deafness, one cannot overemphasize the magnitude of the problems caused by deficits in communication in all areas of life. The acquisition and use of language and the subsequent experiential deprivation presents the primary and pervasive problem for the deaf person.

Extensive surveys show that the literature is almost void of the discussion of industrial arts curriculum planning for hearing impaired students.[49]

The percentage of deaf people who attend college is very small. Therefore, many deaf people need vocational education and/or rehabilitation services. However, in planning vocational curriculum for the deaf the following considerations must be made:

1. Language deficits compound learning problems in all subject matter areas.
2. Reading, math, science, and social studies achievement levels are generally six to seven years behind expected levels.
3. Difficulties in vocational settings are directly related to communication problems of the deaf.
4. The deaf have delayed emotional development and are immature in behavior compared to their hearing peers.

5. Deaf students, in addition to deafness, may be otherwise disabled, blind, or have additional learning disabilities, dislexia, aphasia, or other minimal brain disfunction.

6. The typical layman belief that deaf persons communicate by lip-reading is a false notion.

7. The speech of many deaf persons is not readily understood by people in general.

8. The majority of deaf people "speak" a language that is uniquely their own. The manual language of signs, a combination of "signing," "finger-spelling," and "manual communication," is the most common mode of communication employed by deaf adults.

9. Planning a curriculum to include deaf students' facility in this language is a prerequisite.

Summary

A review of the literature verifies that vocational education must be provided to handicapped and disadvantaged students. Research has also established that:

1. Handicapped and disadvantaged students have special needs requiring modification of the regular vocational programs.

2. Any modification of teacher preparation programs to better serve the handicapped and disadvantaged must be based on a knowledge of the particular characteristics and an understanding of the special needs of the target population.

3. Teachers who expect to provide vocational education to handicapped and disadvantaged students need additional competencies and special preparation.

4. Special education teachers do not possess vocational technical skills to provide adequate vocational education to their students.

5. Vocational teachers generally do not possess the special competence to meet the needs of a handicapped or disadvantaged student placed in the vocational classroom.

6. Special competencies needed by teachers and administrators to provide adequate vocational education to handicapped and disadvantaged students have recently been identified.

7. Attempts have been made to develop teacher preparation programs in this special area. These have included efforts to prepare: (1) vocational teachers with additional competencies, (2) a specialized teacher with both vocational skills and special education competencies; and (3) the wide spectrum of professionals who regularly interact with the non-successful student through the course of the vocational program.

CHAPTER III

METHODS AND PROCEDURES

Introduction

The purpose of the study, as stated in Chapter I, is to determine what special competencies are needed by vocational teachers and/or administrators to provide effective vocational education to non-successful (handicapped and disadvantaged) students. Extensive review of the literature and of innovative vocational teacher preparation programs to determine what special competencies are required by teachers and administrators is found in Chapter II.

After a list of competencies was formulated from the research, an investigation was undertaken to determine whether vocational teachers/administrators in New Hampshire possess the special competencies required to successfully serve non-successful students.

The objective of this chapter was to design the necessary research instrument, as well as the methods and procedures to obtain information to answer the following questions:

1. What special competencies should vocational teachers/administrators possess for teaching the non-successful student?
2. What competencies does the vocational teacher/administrator deem necessary for preparing

teachers to provide effective vocational education to non-successful students?

3. What is the need in New Hampshire for special vocational teacher/administrator preparation to better serve the students presently not succeeding in the regular vocational program?

Selection of the Sample

The State of New Hampshire is attempting to provide vocational education to all students. To attain this goal, New Hampshire was divided into twenty geographical areas wherein will be established comprehensive secondary vocational centers. The advisory committee to this project proposed that vocational teachers and administrators throughout the state's twenty vocational centers and other vocational programs be the subjects in this research effort.

The twenty centers have teachers in vocational education, industrial arts, home economics, distributive education, and special education. It was decided to use, along with these teachers and administrators, the centers' special service personnel for the total population from which information would be solicited.

Assistance was sought from John Bean (Consultant, Special Services, Division of Vocational-Technical Education, State Department of Education) to provide information concerning the location and names of the local vocational directors of each of the twenty centers in the state.

Development of the Instrument

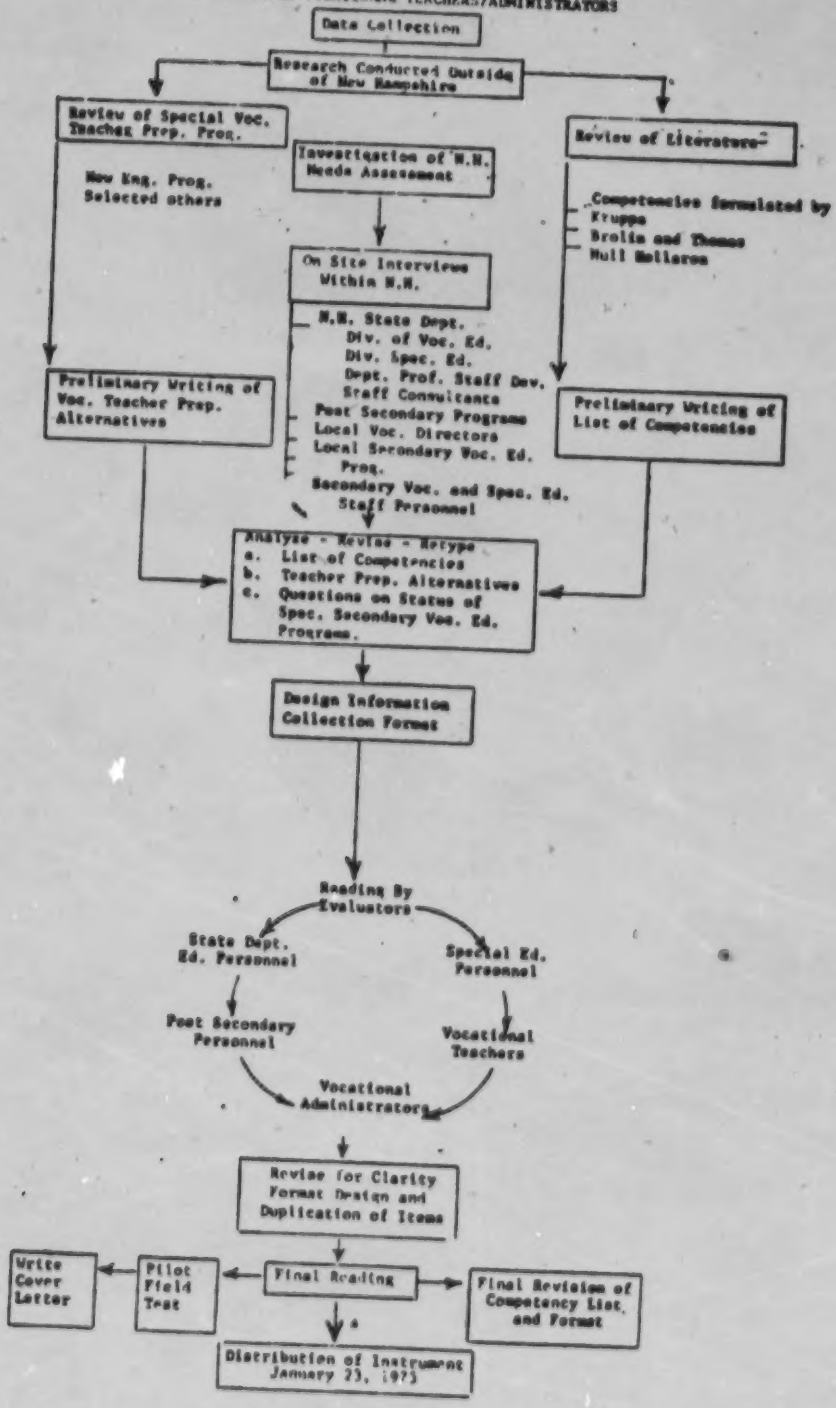
Because of the number and geographical dispersement of the vocational area centers, the questionnaire technique was used to obtain the information necessary for answering the three major objective questions of the chapter. The procedures employed in developing the information gathering instrument is illustrated in Figure 2.

The instrument (Appendix A) was organized into two parts. Part I consisted of a list of twenty-five competencies. The participants were asked to indicate their "Degree of Knowledge" as well as the "Degree of Importance" for the attainment of these competencies. Part II solicited information concerning the status of vocational education programs for the non-successful student and what type of vocational teacher preparation the respondent felt was needed.

Validation of the Instrument

After the questionnaire was formulated, based on the research of necessary competencies, it was presented to the Project Director for approval. Following his suggestions, revisions were made and evaluation of the instrument for clarity, accuracy, and validity was then obtained from various professionals in the field (Appendix C). These persons included two local vocational directors and two of their staff members (one from special education and one

FIGURE 2
PROCEDURES IN DEVELOPING AN INSTRUMENT
TO
DETERMINE SPECIAL COMPETENCIES NEEDED
BY NEW HAMPSHIRE VOCATIONAL TEACHERS/ADMINISTRATORS


Data Collection
Research Conducted Outside of New Hampshire
Review of Special Voc. Teacher Prep. Prog.
New Eng. Prog.
Selected others
Investigation of N.H. Needs Assessment
Review of Literature
Competencies formulated by
Kruppa
Brolin and Thomas
Hull Hallaren
On Site Interviews Within N.H.
N.H. State Dept.
Div. of Voc. Ed.
Div. Spec. Ed.
Dept. Prof. Staff Dev.
Staff Consultants
Post Secondary Programs
Local Voc. Directors
Local Secondary Voc. Ed. Prog.
Secondary Voc. and Spec. Ed. Staff Personnel
Preliminary Writing of Voc. Teacher Prep. Alternatives
Preliminary Writing of List of Competencies
Analyze - Revise - Retype
a. List of Competencies
b. Teacher Prep. Alternatives
c. Questions on Status of Spec. Secondary Voc. Ed. Programs.
Design Information Collection Format
Reading By Evaluators
State Dept. Ed. Personnel
Special Ed. Personnel
Post Secondary Personnel
Vocational Teachers
Vocational Administrators
Revise for Clarity Format Design and Duplication of Items
Write Cover Letter
Pilot Field Test
Final Reading
Final Revision of Competency List and Format
Distribution of Instrument January 23, 1975

from vocational education) along with the student teacher supervisor from the Industrial Education Department at Keene State College. The instrument was also evaluated by a special education specialist as well as a State Department of Education special services consultant and the State professional staff development director. Their criticism and suggestions are incorporated in the final instrument.

On the basis of the evaluators' suggestions, the next task was to revise and combine some questions which appeared repetitious. Also, changes in the format of the instrument were made in order to facilitate the responses of the participants and later analysis of the data generated by these responses.

Following the necessary revisions suggested by the evaluators, the instrument was field tested by the vocational and special education staff members of Keene High School, Keene, New Hampshire and Monadnock Regional High School, Swanzey, New Hampshire on January 20, 1975.

Final reading for clarity of content and format was performed by the project director. Final revision and minor format changes were made and a cover letter explaining the objectives of the research was written (Appendix D). The instrument was then distributed on January 23, 1975.

Data Collection

Beginning in January of 1975, a collaborative effort was made with State Department of Education, Division of Vocational-Technical Education, and local directors of vocational education regarding the distribution and collection of the instrument. Copies of the instrument were then distributed by Mr. John Bean to the local directors at a meeting on January 23, 1975. They were asked to distribute the instrument to their vocational teachers and administrators as well as any special services staff personnel at work within their area. They were also asked to collect the completed instruments and return them either to Mr. Bean, or to Dr. Robert E. Wenig, Chairperson, Industrial Education Department, Keene State College. Two weeks time was allowed for the return of the instrument. Regular contact was kept with the State Department of Education to monitor the progress of the data collection. Following the two weeks, a follow-up letter was mailed to the directors, after which telephone communications from Mr. Bean's office were used to encourage the largest possible return.

Data Analysis

Space was provided for personal data (without asking that each person be identified by name and school location). However, the large majority of respondents identified themselves. Therefore, it was also possible to

identify and analysis the data according to various centers throughout the state.

The returned data were translated to computer punch cards and submitted to the University of New Hampshire Computer Center for statistical analysis on April 24, 1975. Techniques utilized were straight frequency distributions according to the educational position and experience of the participants.

Based on the information obtained from the survey instrument, and a survey of the literature, a competency-based curriculum content model and course overview outline were developed.

Summary

The chapter outlined the methods and procedures of developing a questionnaire to collect the needed information for meeting the objectives of the study. The questionnaire was sent to selected individuals in the designated twenty area high school vocational centers and other vocational programs in New Hampshire. The instrument was administered through the help of the Division of Vocational-Technical Education and the twenty Vocational Center Local Directors. Results of the questionnaire were analyzed through the help of the University of New Hampshire Computer Center to obtain frequency counts from the selected target population.

CHAPTER IV

ANALYSIS OF THE DATA

The purpose of this chapter is to present a brief analysis and interpretation of the data obtained from the survey sent to targeted teachers and administrators throughout New Hampshire (Chapter III).

The objectives of the analysis and interpretation of the chapter were to:

1. Provide a breakdown of administrators and teachers who were willing to respond to the survey instrument.
2. Identify the degree of competency each respondent possessed by ascertaining
   a. The respondents' formal preparation.
   b. Knowledge concerning non-successful students.
   c. Personal rating of degree of competency concerning stated specific competencies.
3. Identify the important competencies for vocational teachers/administrators.
4. Determine the need for teachers/administrators with special competencies by outlining the distribution of handicapped and disadvantaged students in vocational programs in New Hampshire.
5. Describe vocational teacher/administrator preparation needed for competency in serving non-successful students found in regular vocational education programs by answering the following questions:

   Who should be prepared with the special competencies to provide vocational

education to non-successful students found in the regular vocational programs?

When should vocational teacher/administration preparation in this area be offered?

What should be included in teacher/administrator preparation to meet the needs of non-successful students in the mainstream of secondary vocational education?

Analysis of the data was performed by transferring the information to computer punched cards through the University of New Hamsphire Computer Center. The data print-outs gave:

1. The identification of the respondents and a cross tabulation of their responses by position and area of expertise.

2. The absolute frequency of response as well as the relative and adjusted frequency by percent.

Participants in the Survey

The instrument was distributed to four hundred targeted vocational teachers and administrators and special education teachers and administrators as well as special support service personnel. The selection of the participants was based on their association with one of the twenty designated vocational area centers and other vocational program personnel functioning in New Hampshire. One hundred seventy-two persons responded to the survey. The returns represented a forty-three percent total response which was considered adequate to achieve the stated objectives of

the study.

Respondents

As is shown in Table 1, of the 172 respondents, one hundred thirty-two (80 percent) were teachers, eighteen (11 percent) were administrators, eight (5 percent) were guidance personnel and six (3 percent) indicated some other position. Eight respondents did not indicate their classification. Of those teachers responding eight (7 percent) were special education teachers, seventy-five (66 percent) were vocational teachers, and thirty-one (27 percent) taught a subject area. Of the administrators, five were in vocational schools, two were in special education, and two were subject area administrators. Of the guidance counselors, two were in special education guidance and one was in vocational guidance.

From the reported data, as is shown in Table 2, eighty-eight of the respondents were in vocational education and twelve were in special education.

Respondents' Degree of Competence in Teaching Non-Successful Students

In response to the question: "To what degree do you feel prepared to offer vocational education to non-successful students?" seventy-six percent indicated they were not adequately prepared. Twenty-four percent felt that their preparation was adequate.

TABLE 1

RESPONSE TO QUESTIONNAIRE
BY POSITION

Position	Number	Percent
Teacher	132	80.5
Administration	18	11.0
Guidance	8	4.9
Other	6	3.6
Total Valid Responses	164	100.0
Position Not Reported	8	
Total Responsed	172	

TABLE 2

RESPONSE TO QUESTIONNAIRE
BY AREAS OF EXPERTISE

Area	Number	Percent
Vocational Education	88	64.2
Special Education	12	8.8

The assessment of the degree of competence was concerned with the:

1. Preparation to provide vocational education to non-successful students found in the regular vocational education program.
2. Knowledge about non-successful students.
3. Special problems to be faced in meeting the needs of non-successful students.

Respondents' Preparation

Sixty-six percent of the participants indicated they had had no formal course work in the education of the non-successful student. Twelve percent indicated having had three credit hours. Nine percent indicated six credit hours and thirteen percent indicated nine or more credit hours.

Almost one-half the participants (49 percent) also indicated not having attended one workshop or conference dealing with the non-successful student. Seventeen percent had attended one conference or workshop, eighteen percent had attended two, and sixteen percent had attended three or more workshops. The breakdown of this data, according to position, is found in Table 3 and Table 4.

Respondents' Knowledge of the Non-Successful Student

The survey listed six areas of handicaps which may result in students not meeting success in the regular vocational education program. These were: 1) educable mentally retarded, 2) deaf, 3) physically handicapped,

TABLE 3

DATA ON RESPONDENTS' PREPARATION
THROUGH FORMAL COURSE WORK

Course Work	None	3 Credits	6 Credits	9 Credits	More Than Nine	Total
Teachers						
Number	90	14	9	5	11	129
Percent	69.8	10.9	7.0	3.9	8.5	
Administration						
Number	10	4	2	1	1	18
Percent	56.6	22.2	15.4	12.5	12.5	
Guidance						
Number	2	2	2	1	0	7
Percent	28.6	28.6	28.6	14.3	0	

TABLE 4

DATA ON RESPONDENTS' PREPARATION
THROUGH WORKSHOPS AND CONFERENCES

	None	One	Two	Three	Four	Total
Teachers						
Number	69	20	21	5	12	130
Percent	53.1	15.4	16.2	3.8	11.5	
Administration						
Number	3	2	5	4	1	15
Percent	20	13.3	33.3	26.7	6.7	
Guidance						
Number	3	3	0	1	1	8
Percent	37.5	37.5	0	12.5	12.5	

4) disadvantaged, 5) blind, 6) emotionally disturbed. In all six listed categories fifty-one percent or more of the respondents indicated a fair to no degree of knowledge concerning the stated handicapped. The handicapping condition of which the respondents (80 percent) were least aware of was blindness and deafness. The handicapping conditions of which the respondents indicated the greatest awareness was the disadvantaged. However, fifty-one percent indicated a fair or lesser degree of knowledge of the disadvantaged. The degree of knowledge of the six handicaps listed in rank order beginning with the least degree of knowledge, is found in Table 5.

Survey participants were also asked to rate knowledge of the six handicap categories according to the degree of importance to vocational teachers and administrators, i.e., which areas of handicap would they rate as most important, etc. Forty-seven percent rated knowledge concerning the emotionally disturbed as very important. Thirty-seven percent, the lowest number of responses, indicated knowledge of the educable mentally retarded as very important. The ranking of importance of knowledge of the six handicaps, from most important to least important, is found in Table 6.

Table 7 compares the rating of the "degree of importance" with the "degree of knowledge" of the same six handicaps.

TABLE 5

RESPONDENTS' DEGREE OF KNOWLEDGE CONCERNING NON-SUCCESSFUL STUDENTS

Handicap	Degree of Knowledge		
	Percent Good to Excellent	Percent Poor to Fair	Percent None
Blind	20	38	42
Deaf	19	44	36
Educable or Mentally Retarded	27	51	20
Emotionally Disturbed	37	39	24
Physically Handicapped	37	42	20
Disadvantaged	49	36	15

TABLE 6

DEGREE OF IMPORTANCE FOR ATTAINING KNOWLEDGE CONCERNING NON-SUCCESSFUL STUDENTS

Handicap	Degree of Importance	
	Percent Important	Percent Very Important
Emotionally Disturbed	45	47
Physically Handicapped	50	45
Disadvantaged	46	43
Deaf	49	41
Blind	46	38
Educable Mentally Retarded	49	37

TABLE 7

COMPARATIVE ANALYSIS OF "DEGREE OF KNOWLEDGE" AND "DEGREE OF IMPORTANCE" OF KNOWLEDGE CONCERNING NON-SUCCESSFUL STUDENTS

Degree of Importance			Degree of Knowledge		
Handicap	Percent Very Important	Handicap	Percent Good to Excellent	Percent Poor to Fair	Percent None
Emotionally Disturbed	47	Blind	42	38	20
Physically Handicapped	45	Deaf	36	44	19
Disad-vantaged	43	Educable Mentally Retarded	20	51	27
Deaf	41	Emotionally Disturbed	24	39	37
Blind	38	Physically Handicapped	20	42	37
Educable Mentally Retarded	37	Disad-vantaged	15	36	49

Respondents' Degree of Competence

The participants were asked to indicate their "degree of knowledge" of twenty-five competencies (see list of twenty-five competencies, page 29). The respondents' "degree of knowledge" was rated along the following continuum: none, fair, good, very good, excellent. The ten competencies about which the respondents indicated the least degree of knowledge included:

1. Methods of communicating with deaf.
2. How to teach non-readers.
3. Locating and utilizing research and supplementary materials for the handicapped.
4. State regulations, procedures, and funds available for the education of the handicapped.
5. Psychological barriers to the handicapped.
6. Methods and techniques of counseling the handicapped.
7. Classroom management procedures for handicapped students.
8. Approaches to teaching the handicapped.
9. Preparing audio-visual media to and in teaching the handicapped.
10. Mainstream education for handicapped students.

Seventy percent or more of the respondents indicated a fair or lesser degree of knowledge concerning the ten listed competencies. Twenty percent of the total respondents indicated no knowledge relative to those competencies. This list of ten competencies and how they were ranked for degree of knowledge by the respondents is found in Table 8.

TABLE 8

RESPONDENTS' DEGREE OF COMPETENCY TO TEACH NON-SUCCESSFUL STUDENTS

Competency	Degree of Competency		
	Percent Good to Excellent	Percent Poor to Fair	Percent None
Methods of communication with deaf	11	44	44
How to teach non-readers	19	49	32
Locating and utilizing research and supplementary materials for the handicapped	22	45	33
State regulations, procedures, and funds available for the education of the handicapped	23	37	40
Psychological barriers to the handicapped	23	53	24
Methods and techniques of counseling the handicapped	24	56	20
Classroom management procedures for handicapped students	24	56	20
Approaches to teaching the handicapped	28	53	19
Preparing audio-visual media as an aid to teaching the handicapped	28	42	30
Mainstream education for handicapped students	30	46	24

Respondents' Rating of the Degree of Importance of the Competencies

The list of competencies (in addition to the knowledge of the characteristics of non-successful students) was also rated by the respondents according to the degree of importance to be attained by vocational teachers and administrators. The degree of importance of each competency was rated along the following continuum: not important, important, very important.

Forty-seven percent or more of the respondents rated the stated competencies as very important for vocational teachers and administrators to have. The list of competencies and their rank order of degree of importance (excluding competency No. 1, page 29, knowledge of non-successful students) is found in Table 9.

The above stated competencies are by no means intended to be an all-inclusive list needed to prepare vocational teachers/administrators for teaching all types of students. It is, however, a list which related to the areas of competency indicated in the research as necessary for vocational teachers/administrators if they are to adequately serve the non-successful students.

The list of the top ten important competencies illustrated in Table 10 compares the rated "degree of importance" concerning the stated competencies.

TABLE 9

RESPONDENTS' RATING OF THE "DEGREE OF IMPORTANCE" FOR ATTAINING THE COMPETENCIES

Required Competency	Percent Important	Percent Very Important
Approaches to teaching the handicapped	36	60
How to teach non-readers	37	60
Individualized instruction	38	57
Effective methods of communication with handicapped	39	57
Understanding special problems concerning handicapped and disadvantaged	43	55
Methods and techniques of motivating handicapped students	43	55
Employment possibilities for handicapped	43	54
Establishing appropriate learning situations for the handicapped	45	53
Resources available to the teacher	44	50
Personal, social, academic competencies of the handicapped	51	47
Psychological barriers to the handicapped	52	46
Special support services and reassurances personnel within your district	50	46
State regulations, procedures, and funds available for the education of the handicapped	51	45
Factors contributing to low academic achievement	52	45
Use of audio-visual aids in teaching the handicapped	51	45
Instructional sequencing of occupational skills based on job (occupations) task analysis	54	42

TABLE 9-Continued

Required Competency	Percent Important	Percent Very Important
Preparing audio-visual media to aid in teaching the handicapped	53	40
Locating and utilizing research and supplementary materials for the handicapped	57	38
Mainstream education for handicapped students	57	38
Cultural and sociological influences on the handicapped	59	36
Entry and exit level skills in developing career ladders	60	35
Classroom management procedures for handicapped students	55	43
Methods and techniques of counseling non-successful students	49	47
Methods of communicating with the deaf	49	45

TABLE 10

COMPARATIVE ANALYSIS OF THE DEGREE OF COMPETENCY AND DEGREE OF IMPORTANCE OF THE COMPETENCIES FOR ATTAINMENT BY VOCATIONAL TEACHERS AND ADMINISTRATORS

Competency	Degree of Importance	Degree of Respondents' Knowledge		
	Percent Very Important	Percent Good to Excellent	Percent Poor to Fair	Percent None
Approaches to teaching the handicapped	60	28	53	19
How to teach non-readers	60	19	49	32
Individualized instruction	57	58	32	10
Effective methods of communication with handicapped	57	30	52	18
Understanding special problems concerning handicapped and disadvantaged	55	39	49	12
Methods and techniques of motivating handicapped students	55	31	51	18
Employment possibilities for handicapped	54	32	52	16
Establishing appropriate learning situations for the handicapped	53	30	42	28
Resources available to the teacher	50	32	47	21
Methods and techniques of counseling the handicapped	47	24	43	33

Distribution of Handicapped and Disadvantaged Students in Vocational Education Programs in New Hampshire

Respondents to the survey instrument represented fourteen of the twenty designated vocational centers and six other certified vocational education programs in New Hampshire. Of the twenty vocational programs represented by the respondents, seventeen provide instruction to handicapped or disadvantaged students within the mainstream of their vocational education program. Three programs utilize a self-contained special vocational program. One center indicated the use of both organizational approaches. (See Table 11)

The disadvantaged student has the highest incident rate in the programs represented (16 out of 20). Programs are also providing vocational education to educable mentally retarded (14 out of 20), orthopedically handicapped (7), deaf (6), and blind (4). (See Table 12)

The vocational education areas which showed the highest rate of non-successful student enrollment were trades and industry and business education--both of which occur in ten of the twenty vocational programs represented. Other vocational areas provided instruction to non-successful students were home economics (9 of the 20 programs), distributive education (3), agriculture (2), and health occupations (1). (See Table 13)

TABLE 11

ORGANIZATIONAL APPROACH TO PROVIDING VOCATIONAL OCCUPATION TO NON-SUCCESSFUL STUDENTS

	Self-Contained Program	Mainstream Program	Both Programs
Number of Programs	3	16	1

TABLE 12

DATA ON NON-SUCCESSFUL STUDENTS IN THE MAINSTREAM OF VOCATIONAL EDUCATION PROGRAMS

Handicap	Disadvantaged	Educable Mentally Retarded	Orthopedically Handicapped	Deaf	Blind
Number of Programs	16	14	7	6	4

TABLE 13

DATA ON VOCATIONAL AREA PROVIDING INSTRUCTION TO NON-SUCCESSFUL STUDENTS

Vocational Area	Trades and Industry	Business Education	Home Economics	Distributive Education	Agriculture	Health
Number of Programs	10	10	9	3	2	1

Vocational Teacher/Administrator Preparation Needed

One objective of the survey was to solicit the opinions of vocational teachers and administrators concerning their future preparation to adequately serve the non-successful student. Participants were to indicate their opinion concerning:

1. Who should be prepared with the required competencies?
2. When should teacher/administrator preparation to teach non-successful students be offered?
3. What form of preparation is necessary?

Who should be Prepared

The participants were to indicate whether they felt the vocational teacher should be prepared to work with handicapped students, or should the special education teacher be prepared to teach vocational subjects, or should a person be prepared for dual service with competencies as a special vocational education teacher. Sixty-six (57.4 percent) of those responding felt that the vocational teacher should be prepared with competencies to work with handicapped students. Twenty-five (21.7 percent) respondents indicated that the special education teacher should be prepared to teach vocational subjects. Twenty-one (18.3 percent) indicated the need for a person to function as a special vocational education teacher with dual qualifications. Fifty-seven (33.1 percent) indicated no opinion.

The data concerning who should be prepared with competencies to teach the non-successful student are found in Table 14.

TABLE 14

WHO SHOULD BE PREPARED WITH COMPETENCIES TO TEACH NON-SUCCESSFUL STUDENTS

	Number	Percent
Vocational Teacher	66	57.4
Special Educator	25	21.7
Personnel with Dual Qualifications	21	18.3

When is Vocational Teacher/Administrator Preparation Needed

One hundred twenty-six (74.6 percent) respondents indicated the need for in-service occupational teacher preparation to teach the non-successful student. Sixty-seven (39.6 percent) indicated other alternatives to occupational teacher preparation. Space was available for additional comments. Some sample responses included:

> "Get them (occupational teachers) a special teacher, and whose job it is to teach handicapped students."

> "Required of all vocational students in college some course work dealing with awareness of non-successful students. Then they can decide if they wish to teach handicapped. If not, they should not be in a position to have to teach handicapped."

> "Active participation--ON THE JOB."

What Vocational Teacher/Administrator Preparation is Needed

Regarding the needs for in-service preparation, the respondents considered the most important item to be released time for workshops (72 percent). Fifty-six percent chose the need for preparing resource materials to teach handicapped students. Fifty-four percent indicated the need for continuing education and general education concerning handicapped and disadvantaged students, as well as specific skills and techniques used in teaching a particular handicap. The respondents also felt that vocational directors and administrators should participate in in-service programs to learn the nature and needs of non-successful students (45 percent). Space was also provided for elaboration of other items needed for in-service preparation. Some sample responses include:

> "Curriculum should be devised with the special needs-handicapped students under advisement of school psychologist, vocational teachers, audio-visual man, and all others who could contribute."
>
> "Work with special support services."
>
> "Visits to centers with large number of handicapped students."
>
> "Psychological help in learning to respond" (to the students?)

Of those responding to what is needed for pre-service vocational teacher preparation, seventy-three (43.2 percent) felt student teacher experience with handicapped persons and

programs should be offered in the junior year of college. Sixty-four (37.9 percent) indicated the sophomore year. Several other responses agreed that experience in teaching handicapped students should occur early in the vocational teacher's preparation. The following additional open-ended responses indicated the feeling that there is need for early exposure to exceptional students.

"As early as possible so that those who wish can stay away from such programs."

"Should be available from freshman year on."

"Prior to student teaching."

"All four years."

When asked if a practicum experience consisting of general exposure to handicapped persons and the required programs should be offered, one hundred forty-one (92 percent) responded that it should be offered. Sixty-three percent indicated that they felt such an experience should be required of all vocational teachers. Thirty-six percent felt that it should be offered as an elective course. Of those recommending practicum experience concerning the nature and needs of non-successful students, seventeen (12.8 percent) felt it should occur during the freshman year, twenty-eight (21.1 percent) during the sophomore year, thirty (22.6 percent) during the junior year, and forty-five (33.8 percent) felt such experience should be offered during the senior year.

In addition to the list of competencies which the respondents were to rate as to their degree of importance, an open-ended question was asked concerning what information should be included in formal course work preparation. The areas of competency which the respondents indicated were necessary included the following:

1. Identification and evaluation of students with special needs.

   "Identification of problems; methods of teaching the identified problem."

   "Understanding of handicaps from a physical standpoint. How to pinpoint what is wrong."

   "Recognition of handicaps."

   "Recognition of problems; how to handle problems."

   "Reason why they have those problems and how to cope with the problem."

   "How to communicate with the student; how to evaluate the student."

2. Knowledge concerning the nature and needs of non-successful students.

   "Understanding of handicaps from a physical and mental point of view."

   "Characteristics of the handicapped--communication, special problems of handicapped students."

   "Background on needs of the handicapped. The needs of school systems to make this new adjustment. The reality of coping with the problem."

   "Emotional aspects of a disability; dealing with parents of disabled students."

3. Methods and materials used in teaching the non-successful student in the regular vocational education program.

   "Methods and techniques of teaching handicapped students. Resources available."

   "Preparing and selecting material available."

   "Outline of what and how parts of the program can be taught to poor readers."

   "Audio-visual techniques. How to find materials and teaching techniques for reading problems. Ways to motivate disadvantaged, bored students."

4. Teacher-in-training experience with non-successful students.

   "Opportunity for the potential teacher to look closely at himself or herself to see if they want to work with these students."

   "Pre-service training in a school atmosphere with handicapped students."

   "How to go about preparing workshops and in-service offering."

   "Actually experiencing prepared plans."

   "Working as an aid to a classroom teacher."

5. Specific competencies needed by teacher/administrators.

   "The handicapped students' needs within the mainstream of education."

   "Practical pre-vocational and vocational training skills development."

   "How to prepare them (handicapped) for successful employment."

"A simplified approach to each vocational area through a modification of the general educational program with emphasis on safety."

"Less theory and more practical experience in the field of work."

"How to teach them in class, how to handle them in class, how to treat their problems and emotional outbursts, etc."

Summary

The main objective of this chapter was to determine which competencies are needed by New Hampshire vocational teachers and administrators to provide effective occupational preparation to non-successful students within the mainstream of vocational education programs. These competencies will form the basis for the development of improved vocational teacher/administrator preparation. The eight areas of vocational teacher/administrator competencies for investigation were: (1) formal preparation, (2) knowledge concerning non-successful students, (3) individual evaluation to the degree of competency concerning stated specific competencies, (4) individual evaluation concerning the attainment of the stated competencies, (5) the need for vocational teachers/administrators possessing additional competencies, (6) the question of who should be equipped with special competencies to deal with non-successful students, (7) when specialized preparation should be offered, (8) what

should be included in vocational teacher/administrator preparation to better enable them to meet the needs of non-successful students.

Although the instrument was lengthy, the response (43 percent) to the survey provided the necessary information to fulfill the objectives of the study. The respondents included teachers (80 percent), administrators (11 percent), and guidance personnel (5 percent).

The results of the survey communicate the overwhelming need for implementing changes in vocational teacher/administrator preparation which will provide the teachers and administrators the needed competencies to adequately serve all students. A large majority (76 percent) of the respondents indicated they were not adequately prepared in teaching the non-successful student. A substantial majority (66 percent) reported no formal course work and others (49 percent) had not attended any workshops.

Slightly over half the respondents (58 percent) maintained that the vocational teacher should be prepared with competencies to work with non-successful students rather than the special teacher being prepared to teach vocational subjects. A large majority of the respondents (75 percent) also felt the need for in-service staff development.

Vocational teachers (92 percent) stated that for

their expanding role a practicum experience with handicapped persons and programs was needed during the preservice preparation period. A majority (63 percent) of those who indicated the need for such a practicum experience maintained that it should be required.

In addition, the areas of competency which the respondents indicated were needed in vocational teacher/administrator preparation were:

1. Identification and evaluation of students with special needs.
2. Knowledge concerning the nature and needs of non-successful students.
3. Methods and materials used in teaching the non-successful student in the regular vocational education program.
4. Teacher in-service training experience with non-successful students.

CHAPTER V

DEVELOPMENT OF THE CURRICULUM OUTLINE

Introduction

As has been previously stated, the major problem of this study was to determine what teacher/administrator competencies were needed to provide effective vocational education to non-successful students within the mainstream of the educational program. Once the necessary competencies were identified, it became necessary to develop a structured series of intended learning outcomes (curriculum-course outline) within vocational teacher preparation programs.

A review of the literature revealed there are a large number of students termed "non-successful," who have special needs which necessitate modifications in their educational program. Research of the literature also identified specific additional competencies needed by vocational teachers/administrators to provide successful vocational education to these students.

The results of a survey instrument, distributed to selected vocational teachers and administrators in New Hampshire, revealed that a large majority (75 percent), were not prepared with the necessary competencies. Furthermore, there were no vocational teacher preparation

institutions identified in the state of New Hampshire offering a specific program developed to prepare vocational teachers to work with non-successful students.

The purpose of this chapter was to develop a competency-based curriculum course outline to effect change in vocational teacher preparation. The objectives of the chapter are to:

1. Determine those competencies deemed important to be included in vocational teacher preparation and which will enable teachers to meet the educational needs of non-successful students.

2. Develop a structured series of intended learning outcomes (curriculum course outline) to modify vocational teacher preparation, based on the competencies identified in (1) above.

Required Competencies

The review of literature established that there are many students who require modification in the regular school program in order to be successful. The review of literature also revealed that vocational teachers must be equipped with additional competencies in order to meet the special needs of these students. The list of twenty-five competencies identified from literature as needed by teachers/administrators to work with non-successful students is illustrated in Table 15, column I. The list was included in the survey instrument distributed to selected teachers and administrators throughout New Hampshire. Those

TABLE 15

COMPARATIVE ANALYSIS OF THE TWENTY-FIVE STATED COMPETENCIES

I Review of Lit-erature	II Data From New Hampshire Survey										III OSU	IV Recommendations for Inclusion Curriculum/Course		
	Degree of Knowledge				Degree of Importance									
	Percent Teacher		Admists.		Percent Teacher			Percent Administrator			Curr. Model			
The teacher-in-training will become knowledgeable concerning:	None	Poor Fair	None	Poor Fair	HI	I	VI	HI	I	VI	Incl.	HI	I	VI
1. Physical characteristics of handicapped students including:														
a. Educable mentally retarded	22.7	52.4		50	9.5	50.	40.5	27.8	38.9	40.5	No		X	
b. Hearing impaired	40.3	43.4	16.7	50	8.5	49.6	41.9	16.7	38.9	38.9	No		X	
c. Visually impaired	50.4	34.9	11.1	55.6	15.4	46.2	38.5				No		X	
d. Orthopedically handicapped	23.4	46.6	5.6	38.9	53.8	43.6		38.9	38.9	5.6	No		X	
e. Emotionally disturbed	27.1	40.3	11.1	27.8	5.1	48.7	46.2	17.6	23.5	47.1	No			X
f. Disadvantaged	15.4	39.2		33.3	5.0	47.9	47.1	33.3	39.9	22.2	No		X	
2. Approaches to teaching the handicapped	20.8	54.5	5.9	52.9	.8	40.7	58.5		22.2	61.1	No			X
3. How to teach non-readers	36.6	44.9	12.5	87.5	2.6	40.4	57.		11.8	82.4	No			X
4. Individualizing instruction	12.5	31.3		29.4	.8	41.5	56.8		27.8	61.1	Yes (G)			X
5. Effective methods of communication with non-successful students	17.6	47.2	11.8	44.1	1.7	38.8	59.5	5.6	33.3	50.	No			X
6. Special problems concerning non-successful students	16.6	51.5		35.3		43.6	56.4		35.2	52.9	No			X
7. Methods and techniques of motivating non-successful students	18.3	51.6	5.9	70.5		48.2	51.8		23.5	70.6	No			X
8. Employment possibilities for the non-successful student	18.6	54.3		68.8	.8	45.8	52.5	5.6	27.8	55.6	Yes (G)			X
9. Establishing appropriate learning situations for non-successful students	21.9	49.3	11.8	52.9	.9	48.3	50.9		29.4	64.7	Yes (G)			X
10. Resources available to the teacher	23.2	47.2	5.9	41.2		47.6	49.1		35.3	52.9	Yes (G)			X
11. Methods and techniques of counseling non-successful students	37.5	44.5	11.8	47.	2.6	53.4	43.1		33.3	55.6	Yes (G)		X	
12. Personal, social, academic competencies of the non-successful student	20.9	52.9		47.1		55.1	44.9		27.8	66.7	No		X	
13. Psychological barriers to non-successful students	25.2	62.	5.9	47.1	.9	40.2			16.7	72.2	No		X	
14. Special support services and resources personnel within school district	29.	44.4		47.	2.7	54.	43.4		35.3	52.9	Yes (G)		X	
15. State regulation, procedure and funds available for the education of non-successful students	43.7	38.1	5.9	53.7		55.7	44.3	5.9	35.3	47.1	No		X	
16. Factors contributing to low academic achievement	13.5	47.7		29.4	.9	55.3	43.9		35.3	52.9	Yes (G)		X	
17. Use of audio-visual aids in teaching non-successful students	24.2	36.	5.9	64.7	2.6	52.6	44.7	5.9	41.2	47.1	Yes (G)		X	
18. Methods of communication with the deaf	49.2	43.	23.5	41.2	3.4	50.	46.6	5.9	52.9	29.4	No		X	
19. Classroom management procedures for non-successful students	19.7	58.7	11.1	72.2	1.7	56.5	41.7		41.2	52.9	Yes (G)		X	
20. Instructional sequencing of occupational skills based on job task analysis	30.6	35.5	5.9	53.1	3.6	54.5	41.5		58.8	29.4	Yes (G)		X	
21. Preparing audio-visual media to aid in teaching non-successful students	27.3	43.3	23.5	53.8	5.3	55.8	38.9	5.9	41.2	47.1	Yes (G)		X	
22. Locating and utilizing research and supplementary materials for non-successful students	38.1	44.4	11.8	42.	2.6	60.5	36.8	5.9	35.3	47.1	Yes (G)		X	
23 Mainstream education	28.8	48.	5.9	41.1	2.8	39.3	38.	5.9	41.2	41.2	No		X	
24. Cultural/sociological influences on non-successful students	22.	52.7	5.9	47.1	2.5	65.3	32.2	11.1	16.7	66.7	Yes (G)		X	
25. Entry and entry level skills in developing career ladders	31.	72.4	6.3	37.6	4.5	60.7	34.8		64.7	23.5	Yes (G)		X	

participating in the survey were to indicate their felt "degree of competency" and were to evaluate the stated competencies as to their "degree of importance" of attainment by vocational teachers working with non-successful students. The returned data was processed and analyzed with the assistance of the University of New Hampshire Computer Center and is illustrated in column II of Table 15.

The required competencies as determined from the review of literature and the New Hampshire vocational teachers and administrators survey instrument were compared to the Ohio State University Vocational Teacher Preparation Curriculum model to determine if these stated competencies are included. Indication as to whether or not the stated competencies are included in the Ohio State Curriculum model is illustrated in column III. The recording of YES (G) indicated that the competency listed is included in the Ohio State University Vocational Teacher Preparation curriculum model but that it is aimed at the general population of student without specific application to special needs students. The recording of NO indicated that the stated competency is not included in the competency-based curriculum model for general vocational teacher preparation.

Table 15, column IV also indicated which of the stated competencies are recommended for inclusion into vocational teacher preparation to meet the needs of non-

successful students found in their classrooms.

Research revealed that The Ohio State Center's curriculum model did not specifically mention the twenty-five competencies identified in this study. For example, in eight of the twenty-five competency areas, the competency-based curriculum model required the attainment of the competency in a general application without mention of other than average students; e.g., the curriculum model would include the competency "knowledge in approaches to teaching" but would not include "knowledge concerning approaches to teaching handicapped students."

Results of the research instrument indicated twenty-two of the twenty-five competencies were rated important by 50 percent and more of the respondents. (See Table 9, pages 60-61) Also, eighteen of the twenty-five competencies were rated as very important for vocational teachers/administrators to attain. These include the ability to teach non-readers, knowledge concerning approaches to teaching the handicapped, understanding special problems concerning non-successful students, and knowledge about methods and techniques of motivating non-successful students.

The research also indicated that these specific competencies are lacking in general vocational teacher preparation programs as illustrated by the Ohio State University Center Curriculum Model of Competency-based

Vocational Teacher Preparation.

Curriculum Content Course Outline

It has been established that there is a need to modify vocational teacher preparation programs in order to develop in teachers those competencies necessary to work with non-successful students. A reliable delivery system to implement this change is a competency-based curriculum composed of course work developed from those competencies deemed necessary to serve non-successful students. What follows is a list of curriculum content required to provide an overview of the problem encountered in teaching non-successful students.

Curriculum Content Model

Statement of Philosophy

The primary objective of vocational education is to provide students with employable skills upon completion of their program. Traditionally, vocational education's focus was to provide job training to students at the eleventh and twelfth grade levels. Presently, however, education for a vocation has been expanded to occupational exploration through such programs as industrial arts as well as to occupational awareness in the relatively new total vocational package now termed "career education." Therefore, vocational education in its narrow sense would be limited

to entry level training in the eleventh and twelfth grades. However, in its broader meaning, vocational education would include all exploratory programs such as industrial arts education and occupational awareness found in the seventh, eighth, ninth, and tenth grades. Viewed in its broadest sense, vocational education would include awareness of the world of work throughout one's life.

The Keene State College Industrial Education Department offers a four-year Bachelor of Science degree in education with majors in industrial education and vocational education. Also as a member of the University System of New Hampshire, Keene State offers a graduate program granting a Masters of Occupational Education degree. Through the inclusion of information found in this study the vocational teacher preparation in New Hampshire will broaden its prospective to better serve the non-successful students.

Twelve years have passed since the federal mandate to provide vocational education to the handicapped and disadvantaged. Although there is a long way to go before the vocational education needs of the handicapped and disadvantaged will be adequately met, programs have been expanded greatly to include these students. The enrollment is on the rise for two reasons: (1) Recently, the emphasis in education is being placed on "mainstreaming" handicapped

and disadvantaged students into the regular educational programs. (2) The most recent 1975 Amendments to the Elementary and Secondary Education Act state that a student cannot be assigned to a special class or program unless he "cannot function" within the regular program. Both of these factors will effect an increased inclusion of handicapped and disadvantaged students into regular vocational programs.

Curriculum Goals

If Keene State College is to fulfill its role in preparing qualified industrial arts education and vocational education teachers, it must provide its students with the needed competencies to adequately serve the handicapped and disadvantaged.

Job Competencies

In addition to possessing expertise in one's major educational area, they must also possess special competencies to successfully provide adequate vocational education to the non-successful student. Those competencies verified through the research in this study are concerned with:

1. The physical characteristics of handicapped students including such handicaps as: educable mentally retarded, hearing impaired, visually impaired, physically handicapped, emotionally disturbed, and disadvantaged.

2. Special problems concerning handicapped and disadvantaged.

3. Employment possibilities for handicapped.

4. Effective methods of communication with handicapped.

5. Methods of communication with deaf.

6. Approaches to teaching the handicapped.

7. Personal, social, academic competencies of the handicapped.

8. Psychological barriers to the handicapped.

9. Cultural and sociological influences on the handicapped.

10. Methods and techniques of counseling the handicapped.

11. Individualized instruction.

12. Entry and exit level skills in developing career ladders.

13. Instructional sequencing of occupational skills based on job (occupation) task analysis.

14. Mainstream education for handicapped students.

15. Factors contributing for low academic achievement.

16. How to teach non-readers.

17. Methods and techniques of motivating handicapped students.

18. Classroom management procedures for handicapped students.

19. Establishing appropriate learning situations for the handicapped.

20. Use of audio-visual aids in teaching the handicapped.

21. Preparing audio-visual media to aid in teaching the handicapped.

22. State regulations, procedures, and funds available for the education to the handicapped.

23. Locating and utilizing research and supplementary materials for the handicapped.

24. Special support services and reassurance personnel within your district.

25. Resources available to the teacher.

Following is a brief outline of an overview course for gaining additional competencies to meet the needs of all students, especially those non-succeeding. (The members of the Project Advisory Committee served as a jury to review the curriculum content course outline.)

Course Description

Course I: "Concepts in Vocational Education for Students with Special Needs"

Competency: Teachers-in-training will acquire a broad understanding of the nature and needs of the non-successful student. The offering may serve as an introductory course exposing potential vocational teachers to non-successful students. An outline model for this course follows.

Abstract:

The course objective is to develop an awareness of the need for implementing an effective vocational education program for those students not succeeding in the current programs. This awareness will be developed through an increased knowledge concerning their:

1. Identification and behavioral characteristics of the disadvantaged and handicapped;
2. Occupational goals of these students;
3. Special problems and special needs; and
4. Educational practice and materials used successfully with handicapped and disadvantaged students.

The competencies to be developed through this course are intended to be utilized by various strata of personnel likely to come in contact with the non-successful student as he progresses through the school system on into the world of work.

Course Objectives:

The objectives for the course entitled "Concepts of Vocational Education for Students with Special Needs" are to:

1. Gain a general knowledge of the characteristics and problems of students found in regular school programs: educably mentally retarded, orthopedically handicapped, learning disabled, blind, deaf, and disadvantaged.
2. Acquire a basic knowledge of the current historical educational philosophy and programming for the exceptional student.
3. Have an understanding of current and innovative issues and trends in education of the exceptional students.
4. Learn how to organize and/or modify secondary school program for exceptional students.

Time: one semester.

Unit I: How to effect change.

Unit II: Identification and characterization of the disadvantaged and handicapped: The philosophical basis of special education as it relates to occupational preparation.

a. Physical characteristics of: educable mentally retarded, physically handicapped, hearing impaired, emotionally disabled, visually impaired, and disadvantaged.
b. Communication with disadvantaged and handicapped.
c. Personal, social, and academic competencies.
d. Psychological barriers.
e. Cultural-sociological influences.
f. Special problems in teaching disadvantaged and handicapped.
g. Special learning problems experienced by the disadvantaged and handicapped.

Unit III: Attitudes toward the disadvantaged and handicapped.

a. Stereotypes.
b. Research.

Unit IV: Special education concepts.

a. Present goals and programs.
b. Organization.
c. Goals and programs for the future.
d. Approaches to teaching disadvantaged and handicapped.
e. Understanding special problems.
f. Special education and occupational preparation.
g. The resource center concept.

Unit V: The state of the art of vocational education for disadvantaged and handicapped in New Hampshire.

a. New Hampshire state plan.
b. Other state plans.
c. Existing programs.
d. Planned (or innovative) programs.
e. State regulations, procedures, and available funds.
f. Organization of New Hampshire special education programs.
g. Education, the law and the disadvantaged and handicapped.

Unit VI: Vocational goals for the disadvantaged and handicapped.

a. Employment possibilities.
b. Methods and techniques of counseling.
c. Selecting appropriate instructional goals.
d. Job analysis.
e. Out-of-school involvement.
f. Limitations of specific handicaps.
g. Selected programs illustrating points a. through f.

Unit VII: Teaching techniques and materials

a. Approached to teaching disadvantaged and handicapped.
b. Individualized instruction.
c. How to teach non-readers.
d. Classroom management.
e. Use and preparation of audio-visual aids.
f. Instructional Activities Package sources.
g. How to select instructional material.
h. Teacher-made materials.
i. Applications to specific handicaps.

Unit VIII: Methods of communication with disadvantaged and handicapped.

a. Methods and techniques of motivating the disadvantaged and handicapped.
b. Modes of communication with the deaf.
c. Braille.
d. Visual communication.
e. The "New Literacy" (visual literacy).

Unit IX: Special support services.

a. Identify and locate services and personnel in the school, the district, and the state.
b. Locate and utilize research and supplemental materials.
c. Educational Resources Information Center.

Unit X: Course planning for disadvantaged and handicapped.

a. Factors contributing to low academic achievement.
b. Establishing appropriate learning situations.

c. Career ladder concept with entry and exit level skills.
d. Task analysis.
e. Course planning for individualizing instruction.
f. Reporting system.
g. Flexibility of scheduling.
h. Instructional sequencing of occupational skills.

Unit XI: Safety and teacher liability.

Unit XII: Clinical experience/visitation.

Course I provides only for awareness of these twenty-five competencies identified through this study. Additional courses II through V are suggested for program concentration and are found in Chapter VI under Recommendations.

Summary

This chapter brought all the needed elements together to form a curriculum course outline. The competencies identified through review of the literature and a selected college program as well as information gleaned from the survey of selected New Hampshire vocational administrators and teachers provided the knowledge base to build the curriculum-course as outlined. Table 15 provides a comparative analysis of this knowledge base. A brief description of additional courses (see Chapter VI, Recommendations) was provided as a suggested approach to a complete graduate program for vocationalists to adequately prepare them as specialists to serve the non-successful student.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The expansion of vocational education programs to serve students with special needs was mandated by the Vocational Education Act of 1963 and its 1968 amendments. The 1968 amendments specifically identified and classified the areas of handicapped and disadvantaged to be served. The legislation of 1968 also required that not less than ten percent of the basic state grant be set aside for assisting the handicapped and fifteen percent of basic state grants be set aside for handicapped and for disadvantaged students.

Further, in 1970 New Hampshire legislation required the expansion of vocational education programs to include all students--including the handicapped and disadvantaged. Therefore, it is evident there will be an increased number of handicapped and disadvantaged students enrolled in the vocational program areas.

At present the vocational teacher education institutions in New Hampshire offer limited opportunities for preparing to teach handicapped and/or disadvantaged vocational students. These institutions, particularly those comprising the University System of New Hampshire,

might profitably begin providing such education by instruction in an increased awareness of handicapped and disadvantaged students. Instruction in these additional competencies, in the new and expanding role of the vocational teacher, would be a major step toward still further improving the quality of vocational education for all students.

Problem Statement

The major purpose of this study was to determine what competencies are needed by vocational education teachers/administrators in order to effectively provide occupational preparation to non-successful (handicapped and/or disadvantaged) students within the secondary vocational education programs in New Hampshire.

Summary

Review of Literature

A review of the literature verifies that occupational preparation is necessary and a high priority area in the overall educational program for non-successful students. However, students who possess a handicapping condition resulting in their being non-successful have special needs and require program modification.

An investigation of the literature also indicates there is need for modification in teacher preparation programs and the time for this change is now. Any effective

change in teacher preparation must be based on the knowledge and understanding of the characteristics and special needs of non-successful students and of the competencies necessary for teachers to meet the needs of all students.

Further review of the literature revealed that special education teachers do not possess expertise to provide adequate vocational education to their students. It was found that vocational teachers generally do not have the competencies needed to teach non-successful students. Research of the literature also provided various lists of these kinds of competencies.

Information obtained from a review of the literature indicated that innovations in vocational teacher education programs are being implemented in some areas while in others programs are still being developed. Vocational teacher preparation alternatives included: (1) preparing the vocational education teacher with the necessary additional competencies (Glassboro State College in Glassboro, New Jersey), (2) preparing a specialized teacher with competencies in both special education and vocational education (Trenton State College in Trenton, New Jersey), and (3) preparing the staff personnel within a secondary vocational facility to provide a team of special services to non-successful students.

It was also determined from an investigation of the

literature that one of the most important considerations in providing effective vocational education to non-successful students is knowledge about the target population. For the purpose of this study, the term non-successful was the all inclusive term used to describe the student population. Under this terminology, the study enumerated areas of handicapping conditions which may result in students not meeting success in regular vocational education programs. These educational handicapping conditions may include educable mentally retarded, deaf, physically handicapped, disadvantaged, and blind.

The educable mentally retarded: The EMR student comprises the majority of mentally retarded students enrolled in public schools and can be considered as one whose I.Q. is between 50 and 85. EMR students must also be considered on the basis of their adaptive behavior and physical maturation. In addition to low I.Q., the educable mentally retarded person has:

1. Low reading ability.
2. Low math skills.
3. Slow motor development.
4. Lack of acute awareness of environmental conditions.
5. Retarded interest and inactivation in school and learning.

Physically handicapped: The physically handicapped

student has a permanent physical disability which limits the educational process but which does not preclude normal mental functioning. The orthopedically handicapped students may or may not attend public school through some modified means of mobility. Therefore, modification must be made by the school, the teacher, and others on the school staff. Modifications may include:

1. Adapting machinery and equipment.
2. Developing aids to assist the handicapped person in using particular tools.

Blind: Persons having a severe loss of eyesight, ten percent or less of normal vision, must overcome the frustrations in meeting obstacles in performing daily activities of a personal, educational, social, or recreational nature. Educational frustration will necessitate such modifications as:

1. Much individual and personal instruction.
2. Individual set of tools for each student in order for them to be able to feel items during instruction.
3. Longer laboratory orientation.
4. Difficulty in measuring, even with braille rulers.

Deaf: The problems of deafness are greatly compounded by the time of occurrence. The time of occurrence categories are: (1) congenitally deaf, (2) prelingually deaf, (3) deafness after having acquired language. The

handicap of deafness is not the lack of sound but the lack of language which in most cases results in:

1. Experimental deprivation.
2. Motivational retardation.
3. Learning problems in all subject areas due to language deficits.
4. Reading, math, science, and social studies achievement skills are generally six to seven years behind expected levels.
5. Speech often not readily understood by people in general.

Disadvantaged: The disadvantaged student's lack of success is not due primarily to any mental or physical disability. The origin of his or her problem is not easily definable since it may be the result of family status, parent neglect, personal problems, and/or racial or minority group relationships. However, for effective vocational educational planning, behavioral characteristics such as the following must be considered:

1. Poor reading ability.
2. Grade retardation.
3. The association of school environment with past failures.
4. The primary style of learning is by physical and visual means rather than aural or listening methods.
5. Introversion or withdrawal.
6. The teachers' attitude and lack of knowledge of the multiple needs of the disadvantaged.

Methods and Procedures

In order to obtain the information required, an extensive review of the literature was conducted as well as an investigation of selected innovative vocational teacher preparation programs. A survey instrument (questionnaire) was also developed to determine whether or not New Hampshire vocational education teachers and administrators feel they were adequately prepared to provide vocational education to non-successful students. The survey sought to determine what teacher/administrator competencies are needed to be better prepared to serve the non-successful student. The information the questionnaire sought to elicit included:

1. Respondents' formal preparation to deal with non-successful students.
2. Respondents' knowledge concerning non-successful students.
3. Respondents' evaluation of his/her degree of competency concerning specific, stated objectives.
4. Respondents' evaluation of the stated competencies in terms of importance for attainment.
5. The need in New Hampshire for vocational education teachers/administrators with additional competencies.
6. Who should be equipped with special competencies to deal with non-successful students.
7. When should specialized teacher preparation be offered.
8. What should be included in vocational teacher/administrator preparation to better enable them to meet the needs of non-successful students.

Included in the self-evaluation questionnaire was an item intended to determine the vocational teachers' and administrators' opinions as to whether they are adequately prepared to offer vocational education programs to non-successful students.

The New Hampshire State Department of Education, Division of Vocational-Technical Education, aided in the distribution of the survey questionnaire to local vocational directors of each of New Hampshire's twenty centers. Personnel from six additional vocational programs in New Hampshire were also contacted.

Analysis of Data

A total of 172 of the 400 instruments sent (43 percent) were completed and returned for use in the study. Returns came from vocational teachers and administrators as well as special service personnel in fourteen of the twenty state designated area vocational centers and six other schools with vocational programs. The returned data were coded and recorded on computer punch cards for statistical analysis by the University of New Hampshire Computer Center. The data were analyzed according to straight frequency distribution and cross tabulation according to educational position and area of expertise of the respondents. Cross tabulation analysis was also conducted according to the designated vocational center of the respondents.

Information obtained from the statistical analysis indicated:

1. Sixty-six percent of those responding had never taken a course in the education of the non-successful student and forty-nine percent had not participated in a single workshop or conference dealing with the non-successful student.

2. Over fifty percent indicated a fair or lesser degree of knowledge concerning the six categories of handicapping conditions which may result in non-successful students.

3. Of the six handicapping conditions, knowledge of the emotionally disturbed was rated most important. However, sixty-three percent indicated a fair or lesser degree of knowledge concerning the emotionally disturbed student. Sixty-two percent indicated a fair or lesser degree of knowledge about the physically handicapped, seventy-one percent had a fair knowledge of the educable mentally retarded, while eighty percent indicated a fair or lesser degree of knowledge about both deaf or blind students.

4. Sixty percent or more of the respondents indicated a fair or lesser degree of knowledge concerning twenty-two of the twenty-five stated competencies. Twenty percent or more indicated possessing no knowledge relative to thirteen of the twenty-five competencies listed.

5. Twenty-two of the twenty-five competencies were rated by forty-five percent or more of the respondents as being important for vocational teachers working with non-successful students. Eighteen of the listed competencies were valued as very important by forty-five percent or more of the respondents. The two competencies rated most important by the largest number of respondents were: how to teach non-readers and approaches to teaching the handicapped.

6. Seventeen of the twenty State's vocational centers and other vocational programs represented in the survey offer occupational preparation to non-successful students within the mainstream of their vocational education program.

7. Sixteen of the twenty State's vocational centers and other vocational programs provide occupational preparation to non-successful students identified as disadvantaged. Fourteen of the State's vocational centers represented included the educable mentally retarded in their program.

8. Ten of the State's vocational centers and other vocational programs provide vocational education to the non-successful student in the areas of business education and trades and industry. Nine centers provide home economics instruction to non-successful students.

9. Fifty-eight percent preferred that the vocational

teacher be prepared with competencies to work with non-successful students rather than having the special educator be prepared to teach vocational subjects. Eighteen percent favored a pre-service program to prepare a person with competencies fulfilling dual qualifications.

10. Seventy-five percent of the respondents indicated the need for in-service preparation of vocational teachers/administrators with competencies to work with non-successful students. Forty percent preferred pre-service preparation to provide more qualified teachers in this area.

11. Ninety-two percent indicated the need for a practicum experience for vocational teachers dealing with handicapped students and programs. Sixty-four percent maintained such as experience should be required rather than elective.

12. Areas of competency which respondents considered should be part of vocational education teacher/administrator preparation for dealing with non-successful students included:

> Identification and evaluation of students with special needs.
>
> Knowledge concerning the nature and needs of non-successful students.
>
> Methods and materials used in teaching the non-successful student in the regular vocational education program.
>
> Teacher-in-training experience with non-successful students.

13. The results of this study indicate that over seventy-five percent of the responding vocational teachers and administrators in vocational education programs in New Hampshire are of the opinion that they are not adequately prepared to provide vocational education to non-successful students within the mainstream of their vocational programs.

Development of Curriculum Course Outline

After having established those competencies which are considered important to be included in vocational teacher preparation, a curriculum content model and course overview outline were developed based on those stated competencies. The curriculum course content included:

"Identification and Evaluation of the Non-Successful Student."

"Issues Today in Special-Vocational Education."

"Vocational Course Planning for the Non-Successful Student."

"Clinical Teaching Experience."

"Concepts in Vocational Education for Students with Special Needs."

The course entitled "Concepts in Vocational Education for Students with Special Needs" consisted of an outline of unit topics dealing with special problems encountered in teaching the non-successful student.

Conclusion

Objectives of the Study

1. Perform research for the purpose of:
   a. Determining the current status of occupational teacher education programs to instruct non-successful students.
   b. Identifying and describing types and behavioral characteristics of non-successful students.
   c. Determining vocational teacher competencies required by New Hampshire vocational education teachers/administrators to teach non-successful students within the mainstream of vocational education programs.
2. Prepare a curriculum outline at the master's level to specialize in teaching and/or administrating vocational education to these students.
3. Prepare a course outline for an overview of the special problems in teaching non-successful students.

Conclusions

In view of the findings of this study, these conclusions were made in achieving the project objectives:

Objective 1-a: A review of the literature indicated there are a few innovative teacher preparation programs or program models for curriculum development aimed at preparing vocational teachers with the competencies needed to provide education to all students, especially the non-successful (handicapped and disadvantaged) student.

Objective 1-b: A non-successful student has been identified as a person who by reason of some handicapping condition is not attaining success in the regular vocational education program. Depending on the diagnosis and evaluation of the handicap, the educational prescription must be modified to provide for the particular needs and behavioral characteristics of non-successful students.

Objective 1-c: A summary of the information obtained from the needs assessment survey of vocational education teachers and administrators throughout the secondary vocational programs in New Hampshire indicated:

(1-c-1) There is a significant number of the vocational teachers and administrators who are not adequately prepared to provide effective vocational education to non-successful students found in the regular vocational education program. The results of this study indicated that sixty-six percent of the respondents had not taken one course and forty-nine percent had not attended one workshop or conference dealing with non-successful students.

(1-c-2) There is a significant difference between vocational teachers' and administrators' degree

of knowledge concerning handicapped students and the number of programs attempting to provide vocational education to non-successful students within the regular vocational education program. Results of the study indicate that disadvantaged students are mainstreamed into the vocational education program of sixteen of twenty New Hampshire vocational schools responding. In addition, fourteen of the programs provide vocational education to educable mentally retarded students. However, seventy-one percent of those responding indicated a fair or lesser degree of knowledge concerning EMR students.

(1-c-3) A significant number of vocational teachers and administrators possess only a fair degree of knowledge of those competencies rated as important to be attained in order to provide effective vocational education to non-successful students.

(1-c-4) A significant number of respondents stated that the specific competencies listed should be included in vocational teacher preparation if non-successful students are to be profitably included in the regular vocational education program.

Objective 2: Based on the needs assessment of New Hampshire vocational teachers/administrators there is need for developing a curriculum outline at the masters' degree level to prepare teachers/administrators to provide vocational education to non-successful students. Using the list of required competencies and the assessment of New Hampshire's vocational teachers' and administrators' degree of competency, the curriculum content and survey course outline model was developed.

Objective 3: The curriculum content and course overview outline was validated by the Advisory Committee, as well as a third party evaluator. It was determined that the curriculum course model attained the objectives of the project in that it provided a viable delivery system to effect change in vocational teacher education programs.

Recommendations

In view of the findings of this study, the following recommendations are being made. There is a need to:

1. Implement the overview course outlined in this research as part of the required preparation for all prospective vocational education teachers/administrators.
2. Establish a curriculum evaluation committee to

define methods and procedures to operationalize the dual competency-based pre-service vocational-special needs teacher preparation program.

3. Design and implement a curriculum model for both the baccalaureate and master degree levels which will offer teachers-in-training additional competencies to adequately serve the special needs students. The special needs program could provide dual certification in vocational education and special education and provide non-successful secondary students the specialized teachers necessary for effective occupational preparation. Recommended courses to be included in a special needs program concentration are:

Course II: "Identification and Evaluation of the Non-Successful Student"

Competency 1: The teachers-in-training will gain a knowledge of the characteristics and problems of non-successful students found in the mainstream of vocational education programs. They will learn about handicapping conditions which may cause lack of success (educable mentally retarded, emotionally disturbed, blind, orthopedically handicapped, deaf, or disadvantaged).

Competency 2: The teachers-in-training will gain a basic working knowledge about one of the handicapping conditions (their choice).

Competency 3: The teachers-in-training will acquire the ability to perform basic occupational evaluation techniques used with non-successful students.

Course III: "Issues Today in Special-Vocational Education"

Competency 1: The teachers-in-training will acquire the knowledge of current issues in providing occupational preparation to special education students. They will gain an awareness of present goals and programs as well as innovative trends and future goals for preparing the non-successful student for the world of work.

Course IV: "Vocational Course Planning for the Non-Successful Student after having Selected an Instructional Area"

Competency 1: The teachers-in-training will select and develop three demonstration lessons to teach student competencies to be acquired in one instructional area. The lessons will consist of occupational objectives to be attained through laboratory activity, related academic instruction, and remediation techniques.

Competency 2: The teachers-in-training will develop one learning activities package to be used by a non-successful student.

Course V: "Clinical-Teaching Experience"

Competency 1: The teachers-in-training will demonstrate the ability to teach/administer occupational preparation programs for students with special needs through supervised experience in a secondary vocational program which includes the non-successful student in the mainstream of the schools program. They will develop an individualized program to meet various student needs while selecting and developing methods, materials, and media to meet their objectives.

Competency 2: The teachers-in-training will be able to identify and utilize available resources of services and personnel.

4. Design, implement, and coordinate state-wide seminar/workshops to provide in-service staff development to improve non-successful students' participation in vocational education programs. The content of these workshops should develop more than an awareness to vocational teachers and administrators of the special problems encountered in teaching non-successful students. These workshops would include an entire school facility involving all persons who may influence the educational environment of that particular school.

5. Develop and distribute instructional materials and audio-visual media that has been proved successful in teaching students with special needs.

6. Perform further research in such areas as developing:

   a. A delivery system for implementing research.

   b. An instructional materials availability catalog to promote greater student success.

   c. A process to facilitate the required modification of vocational programs for non-successful students based on the total program evaluation of the educational process.

7. Perform further research to determine what specific competencies are needed by administrators of vocational programs in which non-successful students are included. Although such a research effort was beyond the scope of this project, specific administrator competencies were uncovered in the review of literature. Even though they were not validated through the survey instrument they are presented here for the reader's consideration.

The Administrator/Teacher will:

1. Keep the community involved in this program, at both the planning and implementing stages.

2. Keep the curriculum adapted to the individual needs of the students, placing emphasis on usage and application.

3. Become involved in developing curriculum, subject matter, instructional materials, and audio-visual aids for the vocational programs for special needs.

4. Assist teachers in securing special training to improve their ability to work with special needs students. This may be accomplished by encouraging special competency training in researching, developing, organizing, and financially supporting in-service programs.

5. Be able to earn the respect and confidence of the special needs students.

6. Be able to analyze and apply appropriate philosophies in program implementation and to evaluate the effectiveness of instruction provided for special needs students.

7. Be able to develop strategies for working toward the solution for social, cultural, and economic problems facing the handicapped or disadvantaged student.

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APPENDIX A

SURVEY INSTRUMENT

January 15, 1975

KEENE STATE COLLEGE

INDUSTRIAL EDUCATION DEPARTMENT

ROBERT E. WENIG, CHAIRPERSON

NEEDS ASSESSMENT OF SECONDARY VOCATIONAL TEACHERS TO PROVIDE ADEQUATE PROGRAMS FOR HANDICAPPED STUDENTS

Douglas McCarthy

Research Assistant
Keene State College
Industrial Education
Department
Keene, N.H.

PERSONAL DATA

Name _____ School _____

Check position

____Teacher ____Guidance ____Special Ed.

____Administration ____Other (Please explain) ____Voc. Ed.

____Subject area

Circle appropriate status

1. Educational Level

   Secondary Level.....a
   Bachelors Degree.....b
   Bachelors Degree plus hours.....c
   Masters Degree.....d
   Masters Degree plus hours.....e

2. Formal course work in education of the non-successful student

   none.....a
   three credits.....b
   six credits.....c
   nine credits.....d
   over nine credits.....e

3. Number of workshops or conferences attended dealing with the non-successful student

   none.....a
   one.....b
   two.....c
   three.....d
   four or more.....e

4. Indicate the number of years experience as teacher and/or teacher/administrator

one.....a
two.....,b
three.....c
four or more.....d

5. Explain your experience working with handicapped students. Please include years and types of handicap.

PART I

Listed below are several areas of information which are related to vocational teaching and handicapped students. Read each item and circle the number you think indicates your "Degree of Knowledge" or competency in each area relative to your teaching and/or administering of programs. After indicating your "Degree of Knowledge" in the appropriate place, rate each item on its "Degree of Importance" to a teacher and/or administrator of vocational programs for handicapped students.

Rate your "Degree of Knowledge" along the following continuum.

0	1	2	3	4	5
None	Poor	Fair	Good	Very Good	Excellent

Rate each item's degree of importance according to the following scale.

not important NI important I very important VI

	Degree of Knowledge						Degree of Importance		
1. Physcial characteristics of:									
a. Educable Mentally Retarded.....	0	1	2	3	4	5	NI	I	VI
b. Deaf.....	0	1	2	3	4	5	NI	I	VI
c. Physically Handicapped...	0	1	2	3	4	5	NI	I	VI
d. Disadvantaged.....	0	1	2	3	4	5	NI	I	VI
e. Blind.....	0	1	2	3	4	5	NI	I	VI
f. Emotionally Disturbed....	0	1	2	3	4	5	NI	I	VI
2. Understanding special problems concerning handicapped and disadvantaged.....	0	1	2	3	4	5	NI	I	VI
3. Employment possibilities for handicapped.....	0	1	2	3	4	5	NI	I	VI
4. Effective methods of communication with handicapped..	0	1	2	3	4	5	NI	I	VI

		Degree of Knowledge						Degree of Importance		
5.	Methods of communication with deaf.....	0	1	2	3	4	5	NI	I	VI
6.	Approaches to teaching the handicapped.....	0	1	2	3	4	5	NI	I	VI
7.	Personal, social, academic competencies of the handicapped.....	0	1	2	3	4	5	NI	I	VI
8.	Psychological barriers to the handicapped.....	0	1	2	3	4	5	NI	I	VI
9.	Cultural and sociological influences on the handicapped	0	1	2	3	4	5	NI	I	VI
10.	Methods and techniques of counseling the handicapped...	0	1	2	3	4	5	NI	I	VI
11.	Individualized instruction...	0	1	2	3	4	5	NI	I	VI
12.	Entry and exit level skills in developing career ladders.	0	1	2	3	4	5	NI	I	VI
13.	Instructional sequencing of occupational skills based on job (occupations) task analysis.....	0	1	2	3	4	5	NI	I	VI
14.	Mainstream education for handicapped students.....	0	1	2	3	4	5	NI	I	VI
15.	Factors contributing to low academic achievement.....	0	1	2	3	4	5	NI	I	VI
16.	How to teach non-readers.....	0	1	2	3	4	5	NI	I	VI
17.	Methods and techniques of motivating handicapped students.....	0	1	2	3	4	5	NI	I	VI
18.	Classroom management procedures for handicapped students,.....	0	1	2	3	4	5	NI	I	VI
19.	Establishing appropriate learning situations for the handicapped.....	0	1	2	3	4	5	NI	I	VI

	Degree of Knowledge						Degree of Importance		
20. Use of audio-visual aids in teaching the handicapped..	0	1	2	3	4	5	NI	I	VI
21. Preparing audio-visual media to aid in teaching the handicapped.....	0	1	2	3	4	5	NI	I	VI
22. State regulations, procedures, and funds available for the education of the handicapped.....	0	1	2	3	4	5	NI	I	VI
23. Locating and utilizing research and supplementary materials for the handicapped	0	1	2	3	4	5	NI	I	VI
24. Special support services and reassurance personnel within your district.....	0	1	2	3	4	5	NI	I	VI
25. Resources available to the teacher.....	0	1	2	3	4	5	NI	I	VI

PART II

1. What are the total number of students in your school's vocational program?

   a.____0-25 b.____26-50 c.____51-75 d.____76-100

   e.____over 100____how many_____

2. What areas are offered in your school vocational education program?

   a.____Trades and Industry
   b.____Distributive Education
   c.____Home Economics
   d.____Agriculture
   e.____Health Occupations
   f.____Business Education

3. Do you have special education programs offered?

   Yes____ No____

4. What is the number of handicapped or disadvantaged students in your school's special education program?

   a.____0-5 b.____6-15 c.____16-25 d.____26-50

   e.____over 50

5. What is the number of handicapped and disadvantaged students who are included in school's vocational programs?

a.____0-5 b.____6-15 c.____16-25 d.____26-50
e.____if over 50, how many

6. What method of instruction of vocational education programs are provided to the handicapped or disadvantaged?

a.____Special Vocational Program (Self-contained)

b.____Included in the mainstream of the vocational program (regular class)

7. What types of handicapped students are included in the mainstream of your school's vocational program?

a.____Deaf
b.____Blind
c.____Orthopedically handicapped
d.____Educable mentally retarded
e.____Disadvantaged
f.____Other learning disability (please state)

8. What areas in your vocational education program include the handicapped?
Indicate which disability is included. (See Item 7 above for letters indicating disability types)

a.____Trades and Industry
b.____Distributive Education
c.____Home Economics
d.____Agriculture
e.____Health Occupation
f.____Business Education

9. Indicate what formal preparations you have had to teach handicapped students?

a.____None
b.____In-service seminars or workshops
c.____Pre-service
d.____Graduate
e.____Undergraduate
f.____Both

10. What occupational teacher preparation do you feel is needed?

a._____In-service
b._____Pre-service
c._____Other (specify)

11. What do you feel is needed for in-service preparation?

a._____continuing education
b._____released time for workshops
c._____general education concerning handicapped and disadvantaged students
d._____ special skill or techniques used in teaching a particular handicap
e._____preparation in resource materials to teach handicapped
f._____ participation of vocational directors and administrators to learn the nature and needs of handicapped and disadvantaged person
g._____please list others

12. When do you feel student teacher experience with handicapped persons and programs should be offered?

a._____in sophomore year
b._____in junior year
c._____in senior year
d._____other

13. Do you feel practicum experience, such as initial or general exposure to handicapped persons and programs should be offered?

___Yes ___No ___Other

a._____as an elective b._____required

If so when?

c._____Freshman year e._____Junior year
d._____Sophomore year f._____Senior year
g._____Other

14. What information do you feel should be included in course work preparation?

15. What competencies would you recommend for vocational teacher preparation to teach the handicapped?

a. _____ Prepare vocational teacher to work with handicapped.
b. _____ Prepare special educator to teach vocational subjects.
c. _____ Pre-service preparation of person with dual service qualifications fulfilling dual certification requirements.
d. _____ Others, please describe.

16. To what degree do you feel prepared to offer vocational education programs to handicapped students?

_____ adequately _____ not adequately

17. In addition to the items of information listed above, what information or resources to you think are important for vocational teachers and to what degree?

APPENDIX B

CHECKLIST OF TEACHER COMPETENCIES COMPILED

BY HULL AND HALLORAN, 1974

DIVERSIFIED OCCUPATIONS TEACHER COMPETENCIES CHECKLIST

1974

by

Mark Hull

William Halloran

Based on the research of:

Dr. Donn Brolin, Stout State University, Michigan

Dr. J. Russell Kruppa, Trenton State College, New Jersey

Dr. Barbara Bateman, Oregon

Dr. Cotrell, Ohio State University Center for Occupational Education

DESIGNING INSTRUCTION:

The teacher will:

____ 1. Identify the role and function of advisory committees.

____ 2. Establish the criteria for selecting a D.O. advisory committee member.

____ 3. Plan an agenda to be considered by a D.O. advisory committee.

____ 4. Complete a job analysis of two occupations appropriate for EMR pupils to enter. Use the D.O. job analysis format.

____ 5. Observe a prescribed job station and complete a task analysis of the skills and related information needed for the job.

____ 6. Interpret scores of an occupational aptitude test such as the General Aptitude Test Battery in terms of designing classroom instruction.

____ 7. Interpret scores of an occupational interest survey such as the Ohio Vocational Interest Survey in terms of designing classroom instruction.

____ 8. Describe how to incorporate occupational standards of performance into a pre-vocational curriculum.

____ 9. Identify personal, social and academic competencies required for the successful performance of a job that is suitable for D.O. students.

____ 10. Construct an instructional sequence of skills based on a task analysis.

____ 11. Write the educational goals for a Diversified Occupations pre-vocational curriculum.

____ 12. Write terminal performance objectives in three domains: cognitive, psychomotor, and affective.

____ 13. For any given terminal objective, list and sequence all the necessary sub-tasks which, when the student has mastered them, will enable him to perform the objective.

____ 14. Write a lesson plan that identifies specific outcomes, designates methods and media, and provides for evaluation.

____ 15. Given a description of a desired pupil behavior, write an analysis for that behavior.

____ 16. Describe how to coordinate instructional objectives with other teachers in a D.O. program.

DIRECT PURPOSEFUL INSTRUCTION:

The teacher will:

____ 1. Form instructional groups based on pre-test assessments of students.

____ 2. Demonstrate "attention getting" skills.

____ 3. Praise certain appropriate behaviors; ignore certain inappropriate behaviors.

____ 4. Present information in a clear, direct, accurate manner.

____ 5. Solicit student feedback on information presented.

____ 6. Use a variety of questioning techniques.

1. recall
2. synthesis
3. application of principle
4. judgment

____ 7. Respond to incorrect responses.

____ 8. Respond to correct responses.

____ 9. Describe methods of reinforcing pupil behavior.

____ 10. Use reinforcement techniques to change and maintain behaviors.

____ 11. Give prompts and cues which will lead students to give correct responses.

____ 12. Analyze classroom interaction using Transaction matrix and/or Flanders Interaction Analysis matrix.

____ 13. Implement a token economy system for classroom management.

Present information using:

____ 14. Demonstrations

____ 15. Exhibits

____ 16. Video tape

____ 17. Cassette recorder

____ 18. 35 mm slides

____ 19. Motion pictures

____ 20. Single concept films (film loops)

____ 21. Programmed materials

____ 22. Chalkboard, flannel board, flip chart

____ 23. Lecture

____ 24. Role playing

____ 25. Simulations.

____ 26. Adapt follow-up activities from a group presentation that take into account individual skills within the group.

____ 27. Modify verbal presentations according to language comprehension ability of students.

____ 28. Describe specific action for resolution of learning/behavior problems.

____ 29. Describe techniques for relating to individuals in groups.

____ 30. State alternatives to making stereotyped demands on students exhibiting inappropriate behavior.

____ 31. Apply non-verbal techniques (gestures, facial expressions, silence, etc.) to enhance communication.

____ 32. Use humor to achieve relaxed classroom atmosphere.

____ 33. Accept and/or clarify pupil statements in a positive or neutral fashion.

____ 34. Record student behavior while instructing.

35. Derive classroom rules in a democratic fashion and maintain them.

DEVELOPING INSTRUCTIONAL MATERIALS

The teacher will:

____ 1. Visit one of Vermont's two New England Instructional Materials Center satellites: Trinity Media Center or St. Joseph's Media Center to obtain their acquisition list.

____ 2. Name "n" commercial materials one might employ to attain specified instructional objective.

____ 3. Given a specific instructional objective, and relevant entering pupil behaviors, develop appropriate learning materials.

____ 4. Develop a unit of instruction using a multisensory activities checklist. Include reading and math experiences, oral and written expression, art expression, field trips, demonstrations, listening and hands-on experiences.

____ 5. Develop alternative modes of presentation for repetition of content.

____ 6. Describe remedial techniques that will reinforce lesson content for students who need additional help.

____ 7. Modify and/or construct materials appropriate to specific objectives, and evaluate the effectiveness of material.

Develop instructional materials which require the use of the:

____ 8. Spirit duplicator.

____ 9. Mimeograph machine

____ 10. Photocopier

____ 11. Ektagraphic camera set

____ 12. Tape recorder

____ 13. Video tape recorder

____ 14. Orator or primary typewriter

____ 15. Language master

____ 16. 35 mm projector

____ 17. Film strip project

____ 18. Opaque projector

____ 19. Overhead projector

____ 20. 16 mm motion pictures

____ 21. Filmloop projector

____ 22. Video tape projector

____ 23. Cassette recorder

____ 24. Language master

____ 25. Bulletin board

____ 26. Exhibit

____ 27. Models.

____ 28. Devise a filing system for instructional materials.

____ 29. Describe a system for evaluating instructional materials.

____ 30. Set-up a study carrel for individualized instruction.

EVALUATING INSTRUCTION

The teacher will:

____ 1. State educational goals so that their attainment is measurable, and then measure their attainment.

Assess pupil lab performance by the following criteria:

____ 2. Speed

____ 3. Accuracy--error counts

____ 4. Discrimination (proper tools and equipment, movements)

____ 5. Economy of effort

____ 6. Timing (simultaneous operations)

____ 7. Intensity (Strokes, turn, pressure)

____ 8. Coherency.

Evaluate student projects by the following criteria:

____ 9. Appropriateness of materials

____ 10. Workmanship

____ 11. Correspondence to plans

____ 12. Accuracy of measurements, angles, etc.

____ 13. Finish

____ 14. Form instructional groups based on pre-tests.

____ 15. Construct pre- and post-tests for a lesson.

____ 16. Modify a lesson based on information from a pre-test.

____ 17. Record pupil behavior change utilizing at least two different systems.

____ 18. Evaluate specified recording systems.

___ 19. Record pupil achievement for a unit of at least 3 weeks duration.

___ 20. Construct a performance test.

___ 21. Construct a written test utilizing:

a) drawings, diagrams
b) true, false
c) multiple choice
d) matching items

___ 22. Develop a work sample test.

___ 23. Prepare an observation form for evaluating lab performance. Use a descriptive or graphic rating scale.

___ 24. Make an evaluation using anecdotal records.

___ 25. Develop a group progress wall chart for monitoring individual and class achievement.

___ 26. Record a specified behavior for a behavior modification program.

___ 27. Evaluate classroom with time sampling recorder and transactional analysis format.

___ 28. Record and evaluate your classroom behavior according to the following criteria:

a) number of positive reinforcing statements
b) number of negative statements
c) % of time engaged in question asking
d) % of time in information giving
e) % of time in housekeeping, or disciplining
f) % of time listening to students
g) % of time giving corrective or positive feedback.

___ 29. Administer a vocational interest survey.

___ 30. Administer a vocational aptitude test.

___ 31. Devise a filing system for maintaining student evaluations.

PROVIDING STUDENT GUIDANCE:

The teacher will:

____ 1. Present information to students on occupational opportunities; include all occupational clusters offered in diversified occupations labs.

____ 2. Interpret occupational tests and inventories to students.

____ 3. Confer with student and his parents regarding the student's educational development.

____ 4. Conduct a conference for counseling a student.

____ 5. Encourage two-way communication during a conference with a student.

____ 6. Conduct group counseling sessions.

____ 7. Arrange with the guidance or vocational rehabilitation counselor for administration and interpretation of personality, aptitude and interest tests for specific students.

____ 8. Refer students to private and public personnel agencies for occupational and educational information. (Explain charges made by private employment agencies.)

____ 9. Arrange for local office of the State Employment Security or Vocational Rehabilitation and to interpret the General Aptitude Test Battery.

____ 10. Write letters of recommendation for students.

____ 11. Assist students in preparing for interview with potential employers.

____ 12. Assist students in securing and in filling out applications for jobs, manpower training programs, or evening school.

____ 13. Assist students with their problems by working cooperatively with agencies such as the health and welfare services, vocational rehabilitation, and mental health department.

____ 14. Analyze student's cumulative records.

____ 15. Assist students in developing good study habits.

____ 16. Recognize potential problems of students.

____ 17. Assist students in determining ways to best describe their salable skills.

____ 18. Refer students to guidance counselor and other specialists.

____ 19. Supply guidance counselor with performance data about students.

____ 20. Maintain anecdotal records on students.

____ 21. Encourage students to discuss career aspirations.

____ 22. Conduct 2 home visits per academic year.

CONDUCTING RESEARCH:

The teacher will:

____ 1. Critically evaluate research in terms of:

a) clarity in stating the problem
b) design
c) data analysis
d) utilization potential in the instructional setting.

____ 2. Formulate and conduct an evaluative research project with respect to an instructional problem.

____ 3. Evaluate the appropriateness of resources: primary (e.g., tests, journals, etc.), secondary (e.g., ERIC, card catalogs, educational and psychological indexes) and people for solving educational problems.

____ 4. Use resources: primary, secondary, and people to solve information retrieval problems.

____ 5. List 5 instructional resources related to teaching EMR's.

____ 6. State essential provisions made for the education and employment of the handicapped under existing local, state, and federal law.

____ 7. Participate in experimental and other data-collecting research activities.

____ 8. Apply for a mini-grant or exemplary funds to carry out a research project.

MANAGING THE CLASSROOM:

The teacher will:

____ 1. Compile a list of supplies needed for the academic year.

____ 2. Submit supply list to Consultant, Special Education and Pupil Personnel Services.

____ 3. Identify new tools and equipment needed in a vocational course for the academic year.

____ 4. Prepare a capital outlay budget proposal, in accordance with local vocational center policy, for new equipment needed in a vocational course.

____ 5. Plan an operating budget proposal for consumable supplies, services, and materials needed in a diversified occupations program area.

____ 6. Prepare purchase orders for approved vocational equipment and supplies.

____ 7. Describe the procedure for acquiring the consumable supplies and materials needed in a Diversified Occupations program.

____ 8. Recommend reference books and periodicals related to vocational education for the handicapped that should be added to your personal school library.

____ 9. Maintain an inventory of vocational tools, supplies, and equipment assigned to the laboratory.

____ 10. Submit inventory to Vocational Director for approval.

____ 11. Establish a system for repairing and servicing tools and equipment in a Diversified Occupations laboratory.

____ 12. Arrange for the storage and security of laboratory supplies and equipment.

____ 13. Formulate with students acceptable standards of behavior in Diversified Occupations classrooms and laboratories.

____ 14. Uphold acceptable standards of student behavior in Diversified Occupations classrooms and laboratories.

____ 15. Describe your plan to control outbursts of fighting and aggressive behavior using specified behavior modification techniques.

____ 16. Devise and implement student "check out" procedures for tools, supplies, and equipment used in the vocational laboratory (simulate procedures used in local job stations).

____ 17. Present proof that you have scheduled laboratory equipment for maximum utilization by students.

____ 18. Direct students in a system for cleaning and maintaining the Diversified Occupations laboratory.

____ 19. Arrange layout of vocational laboratory to simulate occupational environment.

____ 20. Arrange laboratory work areas and storage space to facilitate student work performance.

____ 21. Provide approved safety apparel and devices for vocational students assigned to hazardous equipment.

____ 22. Establish a procedure for attending first aid needs of Diversified Occupations students.

____ 23. Establish a policy with AVC director for use of the physical facilities by outside groups and other school personnel.

____ 24. Supply administrators with data for progress reports required by the State Department of Education.

____ 25. Devise a system for maintaining occupational information and opportunity data for use by Diversified Occupations students.

____ 26. Maintain a record of safety instruction presented in compliance with safety laws and regulations.

____ 27. Maintain a record of individual work hours, wages, and work progression of on-the-job training.

COMMITMENT TO EDUCATIONAL PROFESSION:

The teacher will:

____ 1. Support professional organizations through membership and attendance at meetings.

____ 2. Participate in non-instructional school duties, i.e., cafeteria, homeroom, bus duty, chaperoning, PTA.

____ 3. Maintain professional certification through enrolling in graduate, extension, and in-service education programs.

____ 4. Expand educational background and leadership potential by achieving advanced degrees.

____ 5. Acquire new occupational skills needed to keep pace with technological advancement in his teaching field.

MAINTAINING COMMUNITY RELATIONS:

The teacher will:

____ 1. Participate in an open house to familiarize members of the school and community with activities of the Diversified Occupations program.

____ 2. Speak to school and community groups on the Diversified Occupations program.

____ 3. Obtain informal feedback on the Diversified Occupations program through contacts with individuals in the school and community.

____ 4. Obtain information from parents relative to their expectations of the Diversified Occupations program.

____ 5. Consult advisory committee to obtain information concerning their expectations of the Diversified Occupations program.

____ 6. Maintain liaison with union officials and employers.

APPENDIX C

SURVEY INSTRUMENT EVALUATORS

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APPENDIX D

COVER LETTER

keene state college
keene, new hampshire 03431 603-352-1909

January 22, 1975

Colleague:

Federal legislation was passed eleven years ago mandated that vocational education be provided to handicapped and disadvantaged students. Amendments strengthening the 1963 vocational education act was enacted six years after. However, handicapped students still are not being provided with adequate vocational education programs. Two possible reasons for this delay are 1) inappropriate vocational education programs, and 2) lack of trained staff to provide vocational education to handicapped and/or disadvantaged students.

Keene State College is attempting to avoid further delay in providing this needed service through developing a curriculum which will prepare vocational teachers to educate and train handicapped students within the regular classroom environment.

Previously Dr. Arthur Ellum conducted a study to determine Attitudes of Vocational Educators Towards the Handicapped. Presently we are attempting to identify what knowledge concerning the handicapped and what competencies are needed by vocational teachers of handicapped students. Because the teacher is the key element in the education of handicapped students, he or she is also a key element in the improvement of instructional competencies.

Enclosed is a questionnaire designed to determine from you what is needed by the vocational instructors to serve the handicapped students who are non-successful in the regular program. We are requesting selected teachers and administrators to assist in this study.

The clarification of these terms is necessary prior to completing the questionnaire:

Vocational program - broad range of secondary programs including industrial arts, job entry skills programs, business education, technical and industrial, home economics, distributive education

Vocational teacher - teachers within the secondary systems including industrial arts teachers

Handicapped students - unless specified this will include disadvantaged, deaf, blind, orthopedically handicapped, educable mental retarded, learning disabled, emotionally disturbed, or students who may not possess an identifiable handicap, but nevertheless experience little success in traditional educational programs

a member of the university of new hampshire system

Please complete the questionnaire that your local director will give you and return it to your director before January 31st. Each local director will forward the completed questionnaires either to the office of Mr. John Bean or Dr. Robert E. Wenig, Chairperson, Industrial Education Department, Keene State College, whichever is more convenient.

Thank you for your cooperation,

Robert E. Wenig,
Department Chairperson

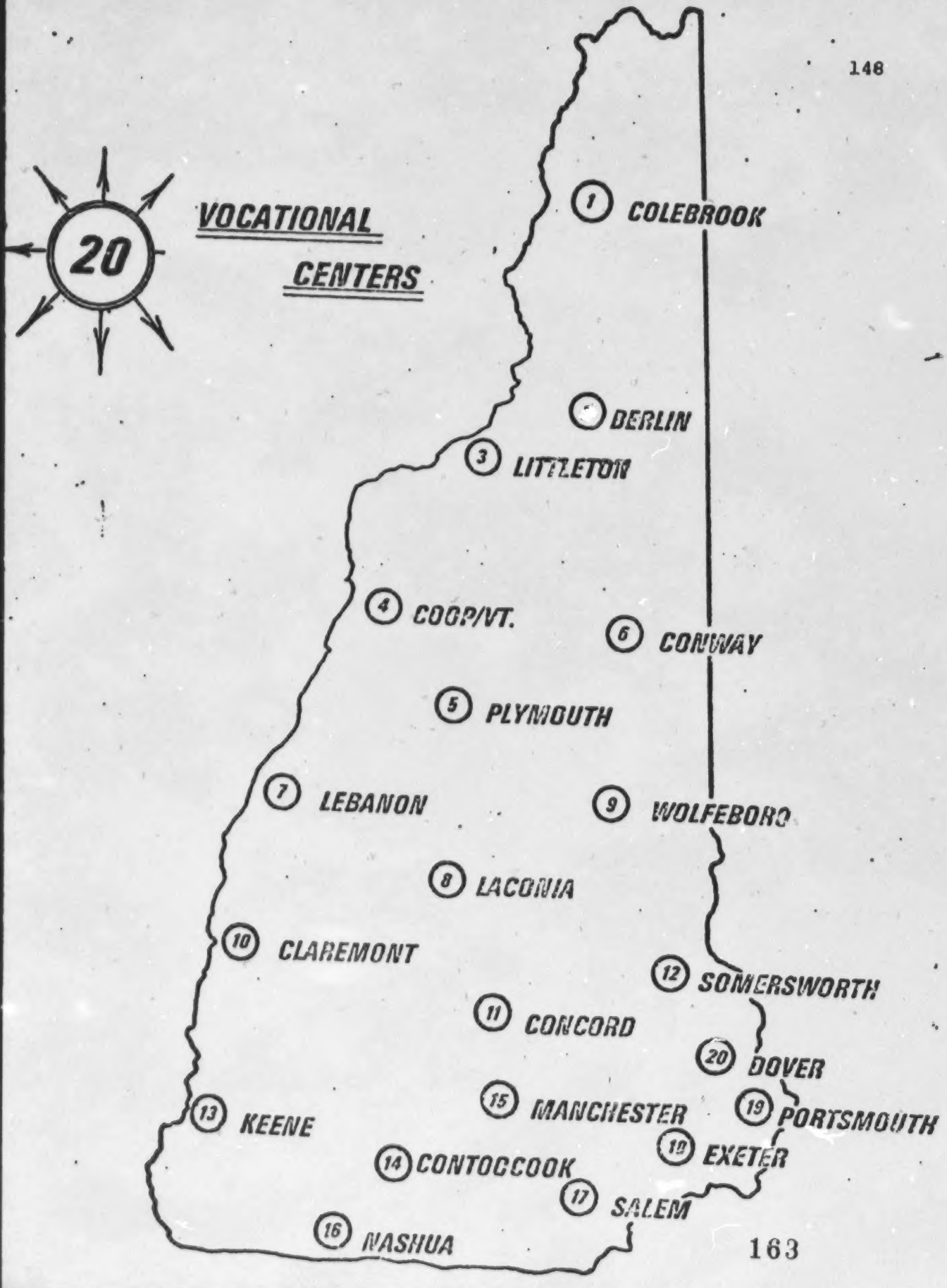
Douglas McCarthy,
Graduate Associate

APPENDIX E

NEW HAMPSHIRE VOCATIONAL PROGRAMS PARTICIPATING IN THE STUDY

Region Number	Center	Address
3	White Mountain Regional	Littleton High School Littleton, New Hampshire
6	Conway	Kennett High School Conway, New Hampshire
7	Lebanon	Lebanon High School Lebanon, New Hampshire
8	Laconia	Laconia High School Laconia, New Hampshire
9	Wolfeboro	Kingswood Regional High School Wolfeboro, New Hampshire
10	Claremont	Stevens High School Claremont, New Hampshire
11	Concord	Superintendent's Office Concord, New Hampshire
12	Somersworth	Somersworth High School Somersworth, New Hampshire
13	Keene	Keene High School Keene, New Hampshire
14	Contoocook Valley	Con-Val Regional High School Peterborough, New Hampshire
15	Manchester	Manchester School Districts Manchester, New Hampshire
17	Salem	Salem High School Salem, New Hampshire
18	Exeter	Exeter High School Exeter, New Hampshire
19	Portsmouth	Portsmouth Senior High School Portsmouth, New Hampshire

Region Number	Other Vocational Programs	Address
Sub Center	Milford	Milford High School Milford, New Hampshire
--	Merrimack Valley	Penacook High School Merrimack, New Hampshire
--	Fall Mountain	Langdon High School Alstead, New Hampshire
--	Monadnock Regional	Monadnock Regional High School Swanzey, New Hampshire
--	Newport	Newport High School Newport, New Hampshire
--	Pinkerton Academy	Pinkerton Academy Derry, New Hampshire
--	Location Not Identified	


20
VOCATIONAL
CENTERS
1 COLEBROOK
2 BERLIN
3 LITTLETON
4 COOP/VT.
6 CONWAY
5 PLYMOUTH
7 LEBANON
9 WOLFEBORO
8 LACONIA
10 CLAREMONT
12 SOMERSWORTH
11 CONCORD
20 DOVER
15 MANCHESTER
19 PORTSMOUTH
13 KEENE
18 EXETER
14 CONTOCCOOK
17 SALEM
16 NASHUA

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